MYRMECIA

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THE COVER
The cover depicts a species of *Riptortus* in the family Alydidae.
It was one of the prize winning entries in the competition at the AES Annual meeting in Canberra, September 1999.

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NOTICE

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COPY DEADLINE FOR NEXT ISSUE

Material for publication in the Novembert 2000 issue of *Myrmecia* will need to be in the hands of the Editor by **Friday 13 October 2000**. All material should arrive by e-mail to laurence@ento.csiro.au. If this is not possible, fax to 02 6246 4264.

EDITORIAL

It's come – and its gone! The first AES Scientific Conference in the Top End proved enjoyable and instructive, and Graham Brown and his team deserve all our praise and thanks. Darwin is one of the world's most laid-back towns. Walking across a road to enter a supermarket I noted that drivers slowed down to give me time to cross. This was a nice contrast to the murderous intent of Canberra drivers. Informality is the rule – Territorians seem to regard shoes with as much distaste as a starched shirt front. Our Official Programme instructed us in the niceties of "Territory Rig" – shirts and trousers for men – but the promising instruction that ladies should "wear something other than shorts and T-shirts" failed to elicit any lack of decorum despite the tropical temperature.

The programme was the usual AES mixture of biology and economic entomology, with rather more than 100 entomologists taking part. Some of the student talks were outstanding. It is good to listen to people who know what they want to say, and a presentation on dengue by a medical nurse had particularly clarity. But it would not be life if there were not a few gripes. We were all instructed to take our Power Point displays on cd-rom, so it was disappointing that many speakers insisted on using their own laptops. This was particularly problematical when, due to computer incompatibility, 10% or more of the area of a slide was outside the projection area – a fact not noticed by speakers who looked only at their own computer screens. Still, this was Darwin, and the audience was tolerant. Even the speaker who stood in front of the projector so that his overheads illuminated his shirt front not the audience drew only the mildest of comments - nice talk, pity about the shirt.

Much of the credit for the efficient running of the talks must go to Deanna Chin from Berrimah who, with constant good humour and great determination changed computers and unjambed slide projectors with monotonous regularity. She even treated with courtesy and kindness the old bloke who gave the final talk whilst failing to operate two Power Point displays simultaneously – sorry if I forgot to say 'Thank You' Deanne.

The 31st Annual General Meeting saw the retirement as Society Officers of Jim Cullen, Meron Zalucki, David Walter and Veronica Brancatini. Our new

President, Andy Austin, was unfortunately overseas, but Peter Ridland took over the hard job of vice-president. We were told that the other two members of the core executive would be DeAnn Glenn as secretary and Nancy Endersby as treasurer. However, DeAnn has now changed her employer, and so Nancy has taken over as AES Secretary with Ian Endersby as Treasurer. We wish them well.

One change that Myrmecia readers may care to check out is being implemented by Murray Fletcher. This will involve the fusion of the Society web page with the Myrmecia web page, and we hope shortly to place the entire Myrmecia copy onto the same web site. Thus you will have only a single site to visit to discover what the AES is doing currently.

Finally, I cannot close without once again 'coming the whingeing pom'. The last issue of Myrmecia indicated that Tish Silberbauer was compiling the biennial list of Postgraduate Entomological Projects. In three months only one response was received from the great 'out there', although a sudden flood arrived just as we went to press. But surely there are more than the 104 students of insects that we list on pages 29 - 32? Remember, it pays to advertise.

LAM

AES Officers

Peter Ridland – Vice President

I completed my BAgrSc in 1970, and my MAgrSc. in 1974, both the at University of Melbourne, where I studied the influence of lucerne bud mite, *Aceria medicaginis,* on growth of lucerne and other legumes. I then joined the Victorian Plant Research Institute in Burnley to work on Argentine ants. In the succeeding years, I have worked with a broad range of agricultural pests, including lucerne aphids, biological control of two spotted mite in ornamental crops, cereal aphids, *Helicoverpa punctigera* in field peas, and control of blackheaded pasture cockchafer. In 1988 I was awarded a PhD from La Trobe University for studies on biology of the rice root aphid (*Rhopalosiphum rufiabdominalis*) and the apple-grass aphid (*R. insertum*).

I have been at the Institute for Horticultural Development, Knoxfield since it was created in 1993, following the closure of the Burnley campus. Since then, my major research interests have centred on improving management strategies for corn earworm (*Helicoverpa armigera*) in sweet corn, and for diamondback moth (*Plutella xylostella*) in vegetable brassicas.

Previous appointment held in AES: Regional Councillor (Vic) and Assistant News Bulletin Editor in early 80s.

Nancy Endersby - Secretary

In 1988, for my BSc honours project at La Trobe University, I studied the Psocoptera of the Grampians and Mt Arapiles. In 1989, I joined the Victorian Department of Agriculture & Rural Affairs at the Vegetable Research Station, Frankston, to work on the Clean Agriculture State Government Initiative. My research focused on alternatives to synthetic insecticides (botanical insecticides, barriers, *Bacillus thuringiensis*, companion planting) as well as developing action thresholds and sampling plans for diamondback moth (DBM), *Plutella xylostella* and cabbage white butterfly, *Pieris rapae*.

After the closure of the Vegetable Research Station at Frankston in 1993, I moved to the Institute for Horticultural Development, where I have been involved in testing DBM for insecticide resistance, documentation of resistance to permethrin in DBM populations from all States and obtaining baseline susceptibility levels for new insecticides for DBM.

Recently, as part of the national DBM project, I have been involved with implementation of crop monitoring and training of crop scouts, studying the effect of new insecticides on beneficial insects and documenting levels of resistance to permethrin in DBM from brassicaceous weeds, canola and forage *Brassica* crops.

Previous appointment held in AES: Regional Councillor (Vic) 1995 - 1998

Ian Endersby - Treasurer

Ian has been a member of the Australian Entomological Society since 1979 and of the Entomological Society of Victoria since 1991. A professional scientist, although not employed as an entomologist, he has a particular interest in the Odonata, having recently updated the checklist for Victorian species, and he has also instigated and reported the discovery of *Hemiphlebia mirabilis* on Flinders Island. Amongst his other studies have been the biology and behaviour of the Eltham Copper butterfly, the summer location of Winter Gnats (Trichoceridae), and the calling behaviour of the Orthopteran *Eurygryllodes* sp.

Ian has spent many years as Treasurer and Public Officer for the Entomological Society of Victoria, Honorary Secretary for the Royal Society of Victoria, and as a member of the editorial committee for the journal *The Victorian Naturalist.*

Glynn Maynard - Promotions Officer

At the Darwin AGM the decision was taken to appoint Dr Glynn Maynard as Promotions Officer, a position

that has not been filled for around 15 years. Glynn's precise role has not been defined, but her objective is to facilitate a greater awareness of the Australian Entomological Society both within the membership and the wider public. Toward this end, ideas from all our readers will be considered. Currently, to increase insect awareness amongst the general public, Glynn is investigating the possibility of the States and Territories each adopting an official Heraldic Insect, and to facilitate communication between entomologists, there is a need to update the address list of South Pacific Entomologists. With the new association between the Myrmecia and the AES web-sites, Glynn is intending to broadcast a message to all members for whom email addresses are available. This message will have a hyperlink to the AES site, in the hope of increasing our members use of the site.

Glynn Maynard is currently the Senior Entomologist for the Australian Quarantine and Inspection Service (AQIS) for Victoria and Tasmania, having recently transferred from the Plant Policy area of AQIS in Canberra. Originally Glynn came from Queensland where she completed her Bachelor of Science, Postgraduate Honours and PhD within the Entomology Department at the University of Queensland. She has also worked with the Queensland Lands Department, CSIRO Entomology and Environment Australia (then the National Parks and Wildlife Service, and Australian Nature Conservation Agency).

AES 31st AGM

The AGM was attended by a considerable number of those present at the Conference. The minutes of the Canberra meeting were distributed and approved, and the Officers presented their reports. The financial statement for the year ending December 1998 indicated that the Society net assets increased over the previous 12 months by 10k to just over 70k dollars. However, income decreased from 75k to 64k, and the AGM decided that an increase in subscription rates should be implemented soon.

AES Awards

The Ian Mackerras Award was presented to Peter Allsopp in recognition of his service to the Society and to Australian entomology. The Phil Carne Prize was awarded to Shaun Winterton for his publication on flies of the family Therevidae. Tony Wapshere was presented (in absentia) with a Society Service Award after many years as a Technical editor.

AES Publications

The following notes are taken from a report provided by Blackwell Science Asia. Abstracts of articles in *Australian Journal of Entomology* are now available free of charge on the Web. The journal is available electronically in libraries at 144 institutes, in Australia, Canada, Korea and New Zealand, and negotiations are proceeding with libraries in the USA, Italy, Denmark and Japan. Thus electronic sales will soon overtake the sales of paper copies. Currently, a total of 147 copies are sold to institutes, and 707 copies to Society Members. International sales are not high, with 53 copies going to the USA but only 9 copies to each of UK and Canada.

In comparison to other journals concerned with entomology, Science Citation Index ranks *Aust.J. Entomology* 40th out of a total of 63, with an Impact Factor of 0.371. This contrasts with the following publications listed by S.C.I.: *Annual Review of Entomology* holds the top position with an Impact Factor of 5.356; *Ecological Entomology* at position 5 with an IF of 1.530; *Bulletin of Entomological Research* at 11 with an IF of 1.045; *Systematic Entomology* at 21 with an IF of 0.789; *Journal of the New York Entomological Society* at 28 with an IF of 0.522; *Florida Entomologist* at 32 with an IF of 0.488; *International Journal of Pest Management* at 51 with an IF of 0.238. Impact Factor is a rough measure of how interesting most of us find a journal, how much we refer to it and how likely we are to buy it (or get our librarians to buy it). Clearly, as a Society we need to make an effort to ensure that our Journal attracts more papers of broader interest to the rest of the world.

LAM

DARWIN 2000

Being transported to the tropics from deep midwinter in Melbourne was only the beginning of the delights I experienced at the AES 31st AGM & Scientific Conference held in Darwin at the end of June. The NT Conference Organising Committee and Convention Catalysts showed us all how a smooth and friendly conference should be run. The Ministerial Reception at Parliament House got the social proceedings off to a good start as southern delegates thawed out and northern entomologists gave them a warm welcome to their Territory.

105 delegates attended the meeting and participated in the thirteen sessions on topics ranging from biodiversity to vectors of human disease. The oral presentations contained a good mixture of pure and applied entomology with added forays into entomological tourism, market access through

databasing and "deadwoodology"! The luxury of no concurrent sessions meant that stressful decision-making was eliminated and each day's early start allowed a large number of presentations to be experienced. Some of my favourites included Graham Young's exposition on the sugarcane stemborer, complete with sugarcane theatrical prop; Djoko Prijono's interesting results obtained in testing the insecticidal properties of *Aglaia* spp. (Meliaceae) against the cabbage cluster caterpillar, *Crocidolomia binotalis*; Christine Evans' revelation on recent increases in dengue cases in Darwin due to increased movement of people to and from Timor, and Laurence Mound's thrips spectacular complete with plate tectonic simulation!

Two mid-conference field trips, one to the Territory Wildlife Park and one to Litchfield National Park, were enthusiastically attended by some of the delegates. Others indulged their weakness for collecting, while some stopped thinking about entomology as they added to their ornithological life list. The lure of crocodiles and waterfalls was not enough to deter one small group of Victorians from going out to look at vegetable crops in the Humpty Doo region, courtesy of DPIF. We met some members of the newly formed Vietnamese Vegetable Growers' Association and heard about the problems they face in growing vegetables in the monsoonal tropics. Asian vegetables and herbs have become a significant component of the vegetable industry in Northern Territory and are produced both for export to the southern states and for local consumption.

Sights of interest included nematode-affected snake beans, okra covered in *Helicoverpa* eggs and larvae, a glimpse of a black-necked stork or jabiru and Vietnamese poetry ("about love", we were told) painted onto a caravan. The tour ended at a remote packing shed to which an endless stream of mini vans laden with boxes containing snake beans, bitter melon, luffas and button squash was arriving. The boxes were unloaded and packed by hand onto pallets to be forklifted into coolrooms awaiting a four-day journey by pantechnicon to Melbourne.

Other highlights of the conference must include watching the sun set over Fannie Bay at the Conference Dinner; a Banjo Pattersonesque salute to entomology by Austin Ash, former Northern Territory Administrator; the thrill (?) for the Victorians of becoming the new Society Executive, pythons at morning tea and a poster with live green ants! The decision to hold the AES 31st AGM & Scientific Conference in Darwin was a master stroke!

Nancy ENDERSBY

Student Forum

Hello again. Congratulations and thanks to Emma and Tara for organising the postgraduate dinner and meeting at the Darwin conference. Everyone seemed to have a really good time (especially at the dinner). Their reports are below. I hope that postgraduate meetings and dinners become traditional at AES conferences.

The biennial listing of postgraduate projects is on us once again (see advertisement in the last issue). The response so far as been pretty dismal, so please could you send me your details for inclusion in the next issue. Please email me with details of the name of the students, project titles, degrees, and name of departments & institutions.

Any students or recent students (ie. those that have just finished their postgraduate theses) who would like to express an opinion or to precis their research in this section, please contact me by email or by phone (02 6773 3021).

And remember to congratulate Clare Baker for winning the AES Award for the best postgrad conference presentation.

Tish SILBERBAUER
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Student Dinner - Darwin

Approximately twenty students (which was most of the students at the conference) turned up for the student dinner held at the Noodle House Chinese restaurant. The dinner was a useful way of meeting other students early on in the conference, and to discuss a variety of aspects regarding postgraduate study. The close proximity of the bottle shop proved to be most fortuitous, as the night progressed and alcoholic supplies were depleted. An interesting aspect of the night was a definite drinking gradient from one end of the table to the other. The tradition of entomologists being able to consume vast quantities of alcohol seems set to be continued in the next generation of up and coming entomologists.

Emma COTTAGE
emmacottage@hotmail.com

What do students want from their supervisors?

At the recent AGM in Darwin a number of postgraduate students met to discuss issues relevant to their studies. About 10 students, of varying experiences attended the discussion. The main area of discussion related to supervisors and what we

Peter Ridland presenting Tara Simmul with her prize for a photograph of a scarab beetle

expect from them.

Early in the discussion it became apparent that there were two different 'groups' of students and their ideas and needs were not necessarily the same. Some students had travelled or been in the workforce before returning to commence studies (or were working part time + studying) whilst others went directly from their first degree into their Ph.D. or M.Sc.. The students who had gone directly into postgraduate studies from their first degree were perhaps not aware of the implications of taking on further study and may need a closer relationship with their supervisor. Students who had worked or travelled had put a lot of thought into their decision to return to University and were able to work reasonably autonomously. These students (in some cases) interviewed potential supervisors before commencing a project and had little hesitation in finding new or more appropriate supervisors when situations changed (ie. personality conflict or change of project direction). These students wanted independence from their supervisors. Some students were in-between the two groups. This highlights the need for students and supervisors to communicate effectively in the early stages of postgraduate projects.

The main points that emerged from the discussion were (in no particular order):

1. Students expect supervisors to be available. If a supervisor is out of the country, on sabbatical or in another location, email must be available and supervisors need to respond promptly. If a supervisor is not able to maintain good contact, then an alternative plan must be implemented (ie. a substitute supervisor) before the student starts to feel "isolated". At all times there needs to be an appropriately experienced point of contact for the student to obtain necessary support.

2. Supervisors' skills need to be complementary to each other and the needs of the student. They should also be the starting point for networking and introducing the student to other scientists. This is particularly important for new students.

3. Students need to be made aware of their scholarship guidelines. Supervisors should inform students of the details of their individual scholarships. Some scholarships have employment restrictions and industry scholarships may have confidentiality restrictions that affect publishing etc. Some scholarships can also be transferred to another university if the student feels they would be better off somewhere else. Students need to be aware of the conditions that apply to their individual case at the commencement (if not before) of their postgraduate study.

4. Students appreciate regular group meetings. These meeting may be fortnightly or monthly and should be an opportunity for all members of the group to discuss projects, equipment needs and their latest research.

Students also felt that a seminar of planned research conducted within the first 6-12 months of a project was also important to get feedback early.

5. Students want to learn to 'grant' write. Writing grant applications currently seems to be something that you learn when you finish a postgraduate degree. Students suggest that it would be better to learn this skill during the degree. For example, writing their own proposal complete with funding requirements or writing 'dummy' proposals. Supervisors should aid and encourage students to do this.

6. Students need to have realistic expectations. Education of new Ph.D., masters, honours students and undergraduates would help to create realistic expectations of the kinds of projects that can be undertaken, progress expected & etc, before the timing for a project is half-way completed.

7. A postgraduate degree is an apprenticeship. Whilst relationships between supervisors and different students vary, supervisors should not assume that because the student says little (or nothing) that everything is going well and that they can therefore become even busier with all their other commitments. Students with little experience may need a lot of guidance with what supervisors may consider very basic and commonsense procedures. Supervisors need to remember this.

8. Students need support. Supervisors need to inform students of procedures within their university that can be followed if they cannot a) talk to their supervisor or b) get support they need from their supervisor. The guidelines for supervision need to be established early in the project, as does the type of relationship that the student and supervisor will have. A serious problem identified was that students felt that there was no 'comeback' after they experienced a supervisor problem. In particular, some students who made complaints were told to either keep quiet or leave their institution. Obviously no University or supervisor likes this type of situation but from student discussion it appears to be very common. As a result, there are supervisors, students and institutions that have been 'branded' – a situation that could be avoided if communication channels were more open.

9. Supervisors should not expect students to become a clone. Students should be able to form their own thoughts and opinions and be encouraged to think independently. Supervisors should facilitate this process by using their experience to present information of differing opinions to students (eg. suggesting/passing on references if they feel the student is not exploring an area fully). Supervisors should listen and accept that students may have different ideas rather than forcing their own.

10. Students would often like deadlines to be set by the supervisor, but still be allowed to work relatively autonomously. Eg. Presentation of a literature review at the end of the first year, draft of first manuscript.

11. Students want supervisors to look past honours grades and consider their ability. Perhaps even conduct interviews of potential candidates. It was suggested that second class honours students make better higher degree candidates because they work harder and don't just assume that because they obtained a first class honours a Ph.D. or M.Sc. will be easy.

12. Students want financial and other support for conferences. Supervisors need to notify students of upcoming conferences, websites where conference details are present and inform students of how to access funds to get to conferences.

Finally, to sum it all up... all students are different and supervisors need to interact with the student to find the best relationship they can. Students want to have a supervisor who is interested in them and their work. They want someone who is honest, supportive and provides continuity throughout their project. They want to develop a good relationship with their supervisor as their mentor, not their boss. They want to discuss ideas and concepts with their supervisors and be listened to. They would also like to learn skills of grant writing and budgeting.

Tara SIMMUL
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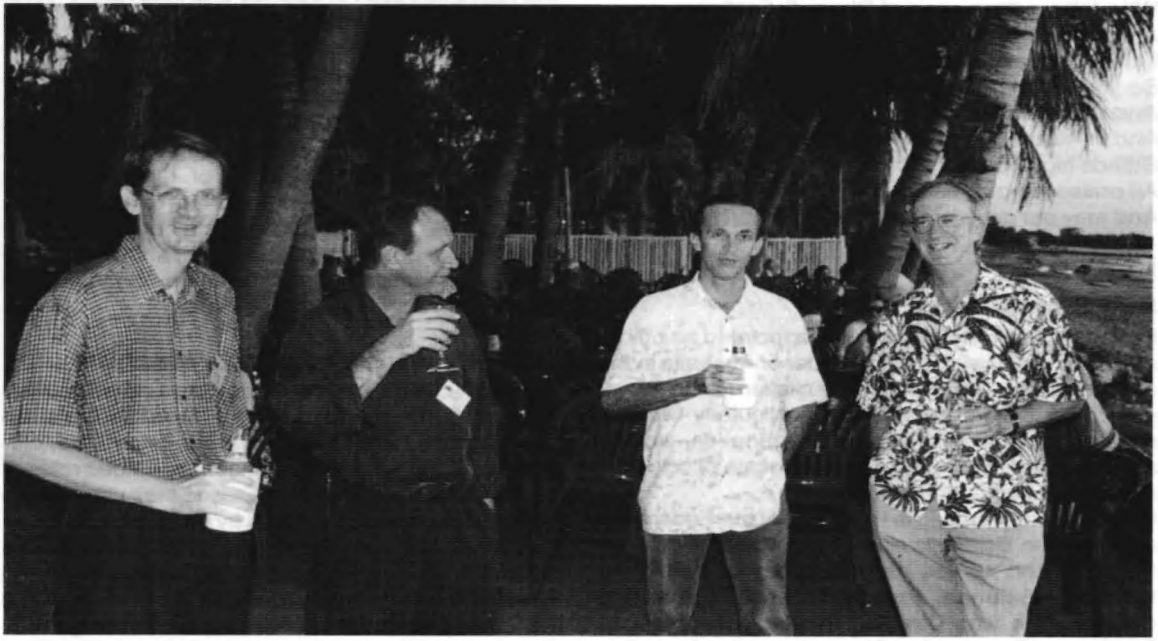
AES Annual Dinner Speech

Austin Ash, formerly Chief Justice of N.T., gave a brilliant after-dinner speech, very much on-the-hoof, that was largely poetical and finished with this Ode to Entomologists.

From Darwin down to Alice Springs,
We mortals think we own the place;
A billion creeping, crawling things
Throws that assertion in our face –
And in our noses, ears and eyes,
And other anatomical cavities,
Bite, sting, spit, defecate and gourmandise
Reducing us to wild depravities.

Lice, ticks and fleas of every nasty kind
Hover about the animals we depend on;
While such as have a more ambitious mind,
Seek out a human body to descend on.
Mosquitoes give us unwished blood transfusions;
We walk with friendly flies, and swallow some;
Termites wreck our architectural effusions,
And raging bull ants bite us on the bum.

Austin Ash with a post-prandial plenitude of poetic pleasantries.



Vicepresident to Myrmecia editor 'Trade you my shorts for your shirt?'
Brad Scholz, Myron Zalucki, Martin Shivas, & Laurence Mound dressed for dinner.

Come Forth, O Champions Entomological!
Patient, assiduous and persevering;
Be not at all apologistical
To introduce genetic engineering.
Create a dominant strain of cannibal fleas
Allergic to all forms of copulation;
Curve the proboscis of Anopheles
To guide it to successful self-castration.

And most of all, and quickly if you can,
Conscious of this disgusting toad's celerity,
Create a bug uninterested in man
And every other creature of the Territory;
A bug that bites, that burrows, squirms and jiggles,
Maddens, devours, poisons, drives insane,
Ingests, digests, infests, chews, chomps and wriggles;
Deracinates, decapitates, rots the brain,
Infiltrates, ovulates, gobbles, grins and giggles:
A GM triumph, to cane toads the cane!

And even if this task cannot be done,
And we gain no immediate protector,
We thank you for the battles you have won,
Probing the mysteries of the Insecta.
And since this group, of numbers astronomic,
Was not meant by Linnaeus for extinction,
I sought the sapient sages taxonomic
Who tell me it's a case of Class distinction.
And sure we know that from this massive Class
Much good may come – as well as threats and danger,
So you are there to classify and pass,
And sort the friendly from the hostile stranger;
And in Australia's proud chronology
Stands high your science, Entomology.
All praise to your research, your skill, your scholars
And may our governments give you many dollars.

FASTS

Sue Serjeantson, AO

Professor Sue Serjeantson was appointed an officer in the General Division of the Order of Australia in the awards gazetted on 12 June. The citation for the Award read: "For service to science, particularly through research in the field of human genetics, and to academic administration as an advocate of scientific research in higher education."
Professor Serjeantson is President of the Federation of Australian Scientific and Technological Societies (FASTS) and serves as a member of the Prime Minister's Science, Innovation and Engineering Council. She was Director, Institute of Advanced Studies and Deputy Vice-Chancellor at the Australian National University for nearly four years. Prior to that, she was Head of the Human Genetics Group and then Acting Director of the John Curtin Medical School at the ANU.
In May, Prof. Serjeantson made some trenchant criticisms of the Federal Budget, saying that it confirmed that Australia would continue to wear the "old economy" tag given it by international money markets. "The rest of the world is investing in research and innovation while Australia considers reports". Australia is failing to keep up with the challenges of the knowledge-driven economy. The future lies in industries based on high technology, and this requires investment in research, development, innovation and industry links. She pointed to a study released by the University of Melbourne, showing education expenditure by the Government is at its lowest level since 1991-92. This Budget should have doubled the funding for the ARC, and encouraged more scientists and mathematicians to become teachers, to inspire the next generation. The only bright spot in an otherwise gloomy budget was additional funding for medical research, and some sorely needed assistance to the higher education sector.

Prime Minister's Science, Engineering and Innovation Council

The PMSEIC met in June at Canberra to consider the future direction of science and innovation. Chief Scientist, Dr Robin Batterham, in presenting an interim report, to Council and to the PM, commented that, for the transition to a successful knowledge economy, a dramatic increase was essential, in private investment in innovation, training, and public confidence in science, engineering and technology. The need to change the mindset of Australia towards science and innovation, is important to our future as an ideas based country. There is a need for greater connectivity between generators of knowledge and those who translate that knowledge and ideas into improved products and processes.

Ghosts in the Corporate Machine

Why are science and technology skills conspicuously absent from the Boards of most Australian companies? Is Australia doomed to carry the "old-economy" tag? Have the traditionally valued roles of law, finance and accounting passed their use-by date in a world increasingly driven by technology?
Dr Terry Cutler, recently named as one of Australia's 50 most influential people, will address these questions at a Forum organised by FASTS at the National Press Club on Wednesday August 2. Principal of Melbourne-based firm, Cutler and Co, Terry Cutler advises governments both in Australia and Asia on IT policy. He is a former head of the IR&D Board,

and is Deputy Chairman of the Australian Information Economy Advisory Council. Prof Sue Serjeantson said the Forum is a natural stepping stone from the Innovation Summit last February to the Budget of 2001. "We stand at a watershed," she said. "It's time to end the national mood of uncertainty on Australia's role in the new century. Scientists are an untapped resource for corporate Australia. They have extensive international networks, and think outside the square, and can add a new dimension to strategic planning in the board room."

The Forum is being supported by the Department of Industry, Science and Resources. It is open to the public and is expected to attract registrations from leaders in industry, research and government. Registration forms should be lodged at the FASTS' office: fasts@anu.edu.au, the registration fee of $190 ($90 for students and post-docs) including the Press Club lunch.

CHAEC Meeting

The 11th Annual Meeting of the Council of Heads of Australian Entomological Collections was held in Darwin on Sunday 25 June immediately prior to the AES conference. The meeting, chaired by **Murray Fletcher**, was attended by representatives of thirteen collections (see photo) plus two observers. Following presentation of collection reports from members present, plus tabling of collection reports from absent members, a range of issues relevant to entomological collections was discussed. These included loss of positions from the ANIC and from the Museum of the Northern Territory, national database initiatives, the potential role of collections staff in training of parataxonomists, collaborative opportunities and a number of esoteric matters relevant to particular collections.

Dick Bashford made special reference to the Long Term Ecological Research site at Warra. This presents opportunities for long term monitoring work on insects which could then be backed up by parallel studies on other organisms at the site. Climatic data and environmental parameters are also being monitored and are available for incorporation into projects. The possibility of linking projects between other LTER sites in Australia and overseas gives the Warra site great potential for entomologists.

A brief discussion on genetically modified organisms highlighted the probable necessity for collections to maintain voucher material of some of these organisms. Possible conflict with new legislation being developed to govern the use and control of genetic material of this kind was discussed.

The possibility of establishing an Official State Insect for each State, to correspond with the State Floral Emblem and the Official State Animal, was discussed. It was agreed that this would be a good method of raising the profile of entomology but would be better handled through the Australian Entomological Society.

Murray FLETCHER
Chaiman CHAEC

Official State Insects

Every State and Territory in Australia has a readily recognisable Floral Emblem. There is also a national Floral Emblem. Did you know there is also an official State Animal and Bird for each State and Territory? Naturally, these are all vertebrates. Apparently, insects don't rate much of a mention in the public's eye, unless it flies in there during a jog.

A chance finding on the internet (actually under the American Army pages!) revealed that each American State has an Official State Insect. Mind you, 13 States have the European Honeybee as their official insect, and a further four have the Monarch Butterfly. Australia has some wonderful insects, many of which have featured over the years in the logos for the AES conferences (see the expanded *Myrmecia* website which now shows them all). Why don't we have Official State Insects too?

There are certainly species that are recognisably associated with particular States. The Ulysses butterfly and the Cairns Birdwing are both used to represent North Queensland. Leichhardt's Grasshopper was used as the logo for the Darwin conference and has featured on an Australian stamp. Western Australia is famous for its buprestids. Queenslanders would probably like to see the cockroach adopted as the State Insect for New South Wales, although there are numerous other species that NSW members would probably prefer to have. In addition, each State Entomological Society has its own emblem, based on the same kind of criteria that I suggest would be used to select an Official State Insect.

My proposal is that, as the national entomological society, we coordinate the selection of a range of potential Official Insects for each State and Territory. I see the following process:

1. Each Regional Councillor and Representative Councillor gathers suggestions for possible candidates for each State and Territory. Such candidates will need to match certain criteria such as presence in that State or Territory (and not elsewhere?), have certain attractive qualities that would justify its selection as an Official Insect (eg highly colourful, significant biologically, relevant to

Costa Rica to Queensland - via Knoxville
Cam Oehlschlager and guests, Mohammed Sallam, Kerrie Huxham, Mofakhar Hossain & Mali Malipatil

Before dinner snacks for -
Kyla Finlay, Trevor Crosby, John Jennings, LeAnn Beanland, Garry Webb & Murray Fletcher

Jim Cullen, Murray Fletcher and Peter Allsopp as Territorians

Cathy Mansfield, Violeta Traicevski, Bernadette Swanson, Karyl Michaels & Alison Medhurst, discussing the price for identifying thrips?

other State Emblems perhaps), be easily recognisable, etc.
2. Members from each State select a small group of five or six species as finalists and put together a paragraph for each species explaining why that species would make a suitable Official State Insect. A photograph of the insect showing off its best features will also be needed.
3. The photograph and paragraph for each species be placed, together with its other State finalists, on the Society's webpage for members of the public to consider and comment.
4. A selection then be made for each State and Territory, preferably by getting the general public to vote (herein lies the good publicity both for entomology and for our best looking insects). Getting schools involved may be one of the best ways to get votes, but I feel that the story on the search for Australia's best insects would have sufficient interest value to get media attention.
5. The official process be followed to have the final selections adopted as the Official State Insect.
I will investigate what we need to do to have our selected species officially adopted but I think potential finalists can be sought now. Please send suggestions to your Regional Councillors. I am happy to collate the suggestions and report on progress in each issue of *Myrmecia*. I would like to have our list of finalists ready for publicity by next Spring if possible.

Murray FLETCHER

BOOK REVIEWS

Insects of Australia

by George Hangay & Pavel German
Nature Guides, New Holland Publishers (Australia)
128 pages; 280 colour photographs
It is always good to see another book intended to interest the general public in insects, or indeed in any aspect of natural history. So much of Australia has been devastated with the objective of our own population enrichment and expansion that we desperately need more people who understand and recognise the value of biological diversity. This attractive and informative book is easy to consult and a pleasure to browse through. If you have a niece of nephew showing any interest in wild life, then certainly it is worth considering as a birthday present. Having said that, writing for the semi-popular market is demanding, and the target audience of this book is not quite clear. It deals with the basic elements of insect structure, the development of a collection, and then comments on and illustrates a wide range of insects. But, with just a little more effort it could have been a much more professional product. The affectation in the figure legends of breaking with the tradition of putting latin names into italic font, to contrast with common names and cursive text, is irritating. An obviously confusing example is "*Thrips*" [in italic font] as a common name (beneath a nice picture of an *Idolothrips* male), in contrast to the succeeding picture labelled "Idolothrips" [in roman font] (actually a male *Mecynothrips*). If scientific names are to be used in a book whose intention is primarily educational, then a publisher should follow the appropriate conventions. Unfortunately, this cavalier treatment of typography extends to the orthography, with too many names spelled incorrectly. Similarly, although the book at first sight seems well designed, with nicely varying colours and page layouts, the text referring to an illustration is too often on the preceding page. The designer has treated the material as cursive text with illustrations, whereas the strength of the book is that it largely comprises excellent photographs with extended and informative captions. A layout reflecting this structure could have given a product with enhanced impact. Ultimately, a book does not just have to look nice, it has to do a difficult and important job – communicate information, ideas and enthusiasm. As my school reports used to say - good, but could have done better.

LAM

Mites in the Rainforest

ABRS has produced a magnificent new poster – 85 x 60 cm – based on the coloured SEM pictures for which Dave Walter at UQ is justifiably famous [http://www.uq.edu.au/entomology/mite/mitetxt.html]. The theme of the poster is the diversity of mites to be found in the Lamington rainforest of S.E. Queensland. An artist's impression of a mossy branch with epiphytic plants is at the centre of the poster, surrounded by 19 coloured SEM pictures set off by a black background. Identifications and notes on biology are given for each mite, and the number with each picture is used to cross reference the mites to a particular habitat indicated in the central picture. This poster is part of an initiative by Environment Australia to increase the relevance of its outputs to the needs of the broader Australian public. Prepared by Heather Proctor and Dave Walter, it is available free on request from Environment Australia, Community Information Unit – freecall 1800 803 772; fax 02 6274 1970.

Alice WELLS

WWW-SPINNERS

A new email list is born. **Ozentomology** is a list for and about Australian entomology and is open to

anyone who has an interest in entomology. It is a list for news, comment, notices and job advertisements. In order to subscribe you have to send an email to majordomo@pobox.une.edu.au with the words "subscribe ozentomology" in the body of the message (no subject line, no signature file).

Institutional sites

http://www.moths.org/ Moths of North America web site. Hot off the presses – a brand new site! At the time of writing this, the site was incomplete, but looks as though it will be finished soon. For those who look at it and wonder, like I did, what WERF stands for – it stands for Water Environment Research Foundation.

Taxon-specific sites

http://www.coleoptera.org/ The Coleoptera home page. This is a huge site and contains such things as: links, databases and catalogues, bibliography, images and sound library, information useful for taxonomists, collectors and naturalists, locality search, rearing beetles, info (listservers, searchengines, and more), directories (entomologists, museums, universities, societies, clubs, etc.), directory of scientists who identify beetles, entomological software, scientific suppliers & dealers, news, gossip, conferences, trips, meetings, pest management, families of Coleoptera, entomology index of internet resources, and an entomological glossary (although the link didn't work when I tried).

http://www.antlionpit.com/welcome.html. The Antlion Pit – a Doodlebug anthology. I have to admit, the term "doodlebug" is what initially caught my interest. Prior to reading the page I had no idea that doodlebugs referred specifically to myrmeleontid Neuroptera. The information on the page is divided into: about antlions, educational resources, antlions in culture, and a bestiary (creatures of myth and psyche). A wide-ranging and interesting site.

Others

http://www.res2.agr.ca/ecorc/apss/chglintr.htm. A superb (for a non-taxonomist like me) glossary of terms associated with chalcid taxonomy. The glossary can be accessed via either a glossary by terms or a glossary by illustrations. This should be a must-see for anyone trying to get a handle on chalcid taxonomy or the taxonomy of related taxa.

Please email me if any of these links are dead. Also, if you have any favourite web sites. I'll do my best to list them in the next edition of *Myrmecia*.

TISH SILBERBAUER

Agronomy & Soil Science, University of New England, Armidale, NSW 2351. tsilberb@metz.une.edu.au

REGIONAL NEWS

AUSTRALIAN CAPITAL TERRITORY

CSIRO Entomology

News from the Forest Entomology Team is tinged with nostalgia. After almost 43 years with CSIRO Entomology, **John Dowse** (Senior Technical Officer) retired on Friday the 7 July 2000. John has had a fascinating career with Entomology – the stuff of best-selling biographies. John's first day with the Division was the 2 September 1957 as a fresh-faced, "quiet boy" from Boorowa. He was then only 19 years of age! Coincidentally, his first 10 years were spent working with **Tom Greaves** on termites of native forests. Tom, about whom it has been said "you could barely get a word in edgeways", is credited with coining John that "quiet boy" after their first overnight field trip. John then joined the Australian plague locust project with **Doug Clark**. John remained in this group for about 10 years during which time he worked with **Keith Wardhaugh** and **Roger Farrow**. John then worked with Roger and **Alistair Drake** on insect migration for another 10 years. Johns last 13 years have been spent planting eucalypts, maintaining experimental sites, recording levels of defoliation and collecting/sorting insects. During this time he has worked with Roger Farrow, **Penny Edwards**, **Wolfgang Wanjura**, **Rob Floyd**, **Michelle Court**, **Ros Schumacher**, **Wendy Whitby**, **Grant Farrell**, **Mamoru Matsuki**, **Martin Steinbauer** and **Saul Cunningham**. John says he has "enjoyed everyday with CSIRO Entomology" but looks back with particular fondness to the "good old days". It is sad to think that such extended and varied durations of service are unlikely in the future, especially given the present climate. The wealth of knowledge (e.g. how to secure that extra glasshouse space) and insight (e.g. how more junior Technical Officers and Postdocs should best bribe STO's) that colleagues such as John bring to organisations where they reside is incalculable.

Other news from Forest Entomology concerns Saul Cunningham who returned from a successful trip around south-east Asia looking at plantations of red cedar, whilst Mamoru Matsuki has returned from Montpellier, France, where he has been quantifying the host-specificity of asian gypsy moth. **Mark Short** has begun a Ph.D. with Martin Steinbauer (CRC for Sustainable Production Forestry & CSIRO Entomology), **Stefan Schmidt** and **John Trueman** (BoZo, ANU) on the taxonomy and biology of hymenopteran natural enemies of autumn gum moth. Mark has a Ph.D. in Pure Mathematics and was a

lecturer before deciding this was not for him. He then came to CSIRO Entomology as an Honorary Fellow with Martin to help sort wasps from Malaise trap samples. He decided he liked that so much that he wanted to pursue it further!

Ian Naumann made it to the AES meeting in Darwin. Apart from the meeting Ian caught up with the NT entomologists regarding the population of crazy ant on the Gove Peninsula and visited **Alan Andersen** in his lab. to talk Hymenoptera and identify a few things in his collection. In May, **Warren Kennedy** from Berlize visited Ian at the National Office of Animal and Plant Health, AFFA, to discuss citrus pests and diseases. **Paul Zborowski**, wildlife photographer, author and entomologist from Mareeba was a surprise visitor to AFFA in May. Also in May, **Robin Batterham**, Australia's Chief Scientist visited AFFA for discussions and a seminar on the competitivenss of Australia's commodity-based industries.

Rolf Oberprieler and **Andrew Calder** have finished editing the beetle papers flowing from the **John Lawrence** Celebration Symposium in Canberra last December. The proceedings of this symposium are now in the printing stage and will appear in a Special Issue of *Invertebrate Taxonomy* entitled "*New advances in beetle systematics and biology*" at the end of the year. Order forms are available from CSIRO Publishing. In early July, **Hiroaki Kojima**, Japan, joined Rolf in ANIC. Hiroaki has started a 2-year postdoc on weevil systematics with Rolf. They now spend long hours in the Zimmerman Weevil lab talking about weevils and their hotly debated classification, also preparing the presentations of their talks for the weevil symposium at the upcoming ICE in Iguassu, Brazil.

During May the Stored Grain Research Laboratory held its strategic planning meeting. This is a triennial consultation with the grain industry and other researchers working on stored product protection, which the SGRL uses to make decisions about future directions for research. Amongst the persons attending were **Pat Collins** and **Barry Walbank** whose input into the process was much appreciated. **Jane Wright** reports that work on the new fumigant carbonyl sulfide is progressing well. Laboratory studies on dosage requirements have provided an indication of the time required for exposure periods with this fumigant over a range of temperatures and concentrations. Jane also reports that there has been considerable interest expressed by a number of parties in the commercialisation of this fumigant. **David Rees** is approaching the end of his six-month secondment to the AQIS Plant Policy Branch, where he has been involved in import risk assessment. **Jonathan Banks** has been invited to resume the Chair of the Methyl Bromide Technical Options Committee (MBTOC) of the Montreal Protocol for a three-year term. You may recall that he was the inaugural Chair and stood down after five years in office. **Stephen Beckett** is completing a two-year GRDC project, during which he investigated the effect of heat shock and heat 'soaking' on insect mortality. He indicates that we now have information on the time required to achieve levels of mortality (LD 50 and LD 99) over a range of grain temperatures from 49-62 deg C. Stephen has also been studying the effect of 'moderate' temperatures (46-51 deg C) on a range of *Liposcelis* spp. found in grain storages. The objective is to determine the time required for levels of mortality that might be achieved during 'bake out' scenarios in grain storage and food processing facilities. Michael Lenz has been traveling again. This time he attended a special termite symposium of the International Research Group on Wood Preservation. The meeting was in honour of **Jeff La Farge**, who spent a considerable amount of time in the French Quarter of New Orleans working on *Coptotermes formosanus*. Thereafter together with **Jim Creffield**, he did some fieldwork at Gulfport (Miss). Mike informs us that **Judith Korb** has completed her postdoctoral study of *Cryptotermes secundus* in the mangroves at Darwin. She has now won a new grant from the German Research Foundation to establish her research career. Based on her work with *Cryptotermes secundus* the grant allows her to set up a laboratory at a German University (Regensburg) with the added bonus of supervising two Ph.D. students from Germany. Congratulations Judith! We look forward to seeing her again when she returns to Australia in due course. As a result she will be returning to Australia.

Penny Greenslade with mycological collaborators **Cheryl Grgurinovic** and **Jack Simpson** and year 12 students **Leah Bala** and **Laurent Greenup** has been pursuing springtails in fungal fruiting bodies. It seems that native springtails feed happily on many native fungi but do not enjoy the common culinary *Agaricus* in out kitchens. However, exotic introduced Collembola have no problems in digesting them just like us.

Laurence Mound and **David Morris** have been hard at work on their *Acacia* thrips project. This has involved sorting through the thousands of thrips collected over the last four years and transferring these from ethanol onto microscope slides so that work can begin on revising the systematics of the thrips fauna from *Acacia*. In addition, David is relieved that three long years of postgraduate studies at Flinders University has culminated in his Ph.D. being accepted by his degree assessors.

Nick King, the new Director of BioNET International visited ACIAR, AFFA and ANIC before attending the Pacific BioNET meeting in Nadi, Fiji, in March. This meeting was also attended by **Ebbe Nielsen** as a resource person. The meeting resulted in an agreement about a Pacific LOOP under BioNET to be known as PaciNET and to be hosted by the Secretariat for the Pacific Countries (SPC) in Suva. At this time it is uncertain what impact recent events in Fiji will have. In April, Ebbe Nielsen addressed the US National Biological Informatics Infrastructure (NBII) planning meeting in Philadelphia. In May, he served on the Australian delegation to the Conference of the Parties to the Convention on Biological Diversity; among many items the meeting endorsed the Global Taxonomy Initiative (GTI); full text at URL http://www.biodiv.org/Decisions/COP5/pdf/COP-5-Dec-All-e.pdf. In July he led an Australian delegation to the US to negotiate future opportunities in biological informatics; other entomologists involved were **Ken Walker** (Museum Victoria), **Mike Dallwitz** and **Steven Shattuck**. Ebbe has also accepted to serve on the expanded ABRS Advisory Committee.

In Lepidoptera, **Ian Common's** third and final volume of his three-volume monograph on the 271 genera of Oecophorinae has been published in June. **Murray Upton** has finished checking the proofs for 'Butterflies of Australia. Their identification, biology and distribution' and this is now with the printer and will be available in August. **Ted Edwards** is reading proofs of the butterfly volume of the Zoological Catalogue at the moment. **Marianne Horak** has completed the text for all of the 85 genera of olethreutine tortricid genera that are known from Australia. Ted Edwards and **Tom Weir** participated in the Queensland Royal Geographic Society Expedition to White Mountains and report very good collecting. **Robert Hoare** from NZAC, Auckland, visited in March and July to work on Nepticulidae and Depressaridae.

David Rentz has submitted the third volume of 'Tettigoniidae of Australia' to CSIRO Publishing; this volume deals with the Listroscelidinae, Tympanophorinae, Meconematinae and Microtetigoniinae and will be available before the end of the year.

Steve Shattuck and **Natalie Barnett** have completed BioLink version 1.0, it will be available from CSIRO Publishing in early August. Institutional licence agreements are also available now.

Stefan Schmidt received a short-term visitor grant from the Smithsonian and will be going there in August. He will use the possibility to visit the Canadian National Insect Collection in Ottawa to discuss joint projects and chalcidological issues with **Gary Gibson**. During a subsequent stay at the Natural History in London the current research of parasitoids of native whiteflies in Australia will be the focus and the results of recent collecting efforts in Western Australia will be discussed with **Andy Polaszek** and **Jon Martin**. Jon joined Stefan during his spring trip to the Kimberley to collect whiteflies and their parasitoids.

Keith Wardhaugh has just returned from a 3-week trip to Korea, where he is involved in setting up a dung beetle program. Keith has become an Honorary Fellow of the Korean Rural Development Administration and is trying to develop collaborative ties in various areas of entomology. Interested persons with expertise in honeybees, bumble bees, tiger beetles or earthworms can contact Keith on Keith.Wardhaugh@ento.csiro.au.

Martin J. STEINBAUER
Regional Councillor

NEW SOUTH WALES

Medical Entomology – University of Sydney / Westmead Hospital

It has been a busy time for the Department with **Richard Russell**, **Stephen Doggett**, **John Clancy**, **Katrina Patsouris**, **Cameron Webb**, **Karen Willems**, **Petrina Johnson**, and **Liesl Schiller** all attending the joint 8th Arbovirus Research in Australia and 4th Mosquito Control Association of Australia International Symposium held on South Stradbroke Island during early July. This joint Symposium is held every four years, and brings together interstate and international mosquito and arbovirus researchers. Dr William E. (Bill) Walton of the University of California, Riverside, visited with Richard to discuss issues of mosquitoes in constructed wetlands, on his way to the conference where they both presented papers on this topic.

Richard was also busy during June and July with an assignment for AQIS on strategies to reduce the risk of exotic mosquito vectors being imported to Australia from Indonesia, East Timor, and Papua New Guinea. There have been various incursions of *Aedes aegypti* and *Aedes albopictus* (both vectors of dengue viruses) to a number of northern ports (and as far south as Sydney), and there is a significant public health concern.

As the Sydney Olympics approach, Petrina, Cameron and Karen are preparing for an early start to the mosquito monitoring period, this year covering the period of the Olympic and Paralympic Games. While it is expected mossie populations will be low, the logistics of trapping around the Olympic site during

the games should add a new organisational dimension to fieldwork!

The NSW Arbovirus and Mosquito Monitoring Program has finished for the 1999/2000 season and, despite considerable rainfall, the overall abundance of mosquitoes was generally low. There was little significant virus activity in NSW, although WA and the NT experienced widespread activity of Murray Valley encephalitis (MVE) virus. Katrina has begun work sequencing Ross River virus isolates collected from the program, and this will continue when the program recommences in November 2000.

Cameron WEBB

Macquarie University,
Commonwealth Key Centre for Biodiversity and Bioresources

Rebecca Harris has just completed writing up her thesis on the effects of grazing on the spider assemblages of northeastern NSW forests. **Melissah Rowe**, having sorted out the sex lives of millipedes for her first Honours project, is now in Tunisia, working on the foraging strategies of that amazing desert ant *Catoglyphis* for her second. **Tony Pik** and **Mark Dangerfield** recently completed work for a large local council in northern Sydney showing how ant monitoring can be used to follow the progress of different bush regeneration methods. **Aletha Cruse** is finally writing up her thesis research on the different methods termites have evolved to protect colonies against microorganisms. **David Briscoe** will be our representative at the meetings in Brazil, presenting seminars on our research on antibiotics in insects and on BioTrack, our biodiversity data management system for environmental monitoring. **Dick Frankham** continues the imaginative use of *Drosophila* to answer pressing questions in conservation, especially those concerning the genetics of captive breeding. **Jo Clarke** has started her PhD as a Glaxo-Wellcome Australia Postgraduate Scholar investigating antimicrobials from a variety of insects and other invertebrates.

Lesley Hughes and her research group are investigating ways in which global change will affect plant-insect interactions. **Caitlin Johns** is performing experiments on how leaf-mining insects are affected by increased temperatures and elevated CO2. **Linda Beaumont** is using bioclimatic modelling to investigate potential impacts of climate change on Australian endemic butterflies. **Nigel Andrew** is studying how the community structure of herbivorous insects on *Acacias* changes along a 1200 km latitudinal gradient with a view to predicting the potential effects of shifting climate zones.

Dinah Hales is still with us, as a Senior Research Fellow and chief aphid farmer on an ARC-funded project on basic aphid genetics. She and **Mat Sloane**, research assistant, constitute the whole lab. **Paul Sunnucks** has moved to Melbourne where he now has a lectureship in genetics at LaTrobe University, and **Alex Wilson**, after a sojourn in Canberra, has completed her PhD and moved to UC Davis as a post doc (on hydrozoans, would you believe). In 1st semester, **Helen Doherty** (honours student) worked with Dinah and Mat on reproductive behaviour of male aphids. PhD students **Alex Newman** (Royal Botanic Gardens) and **Anna Pawlak** (at CSIRO Molecular Science with **Ron Hill**) hope to finish their theses in the foreseeable future. Dinah is also trying to fit in a range of retirement activities including a graduate diploma – no, the diploma has nothing to do with insects.

Andrew BEATTIE

University of New England

Tish Silberbauer and **Dave Britton** recently attended the Australian Entomological Society conference in Darwin. **Peter Gregg** and **Dave Britton** are presently hooning around central Australia as we speak (somewhere east of Alice Springs) - they're chasing *Helicoverpa*. Apparently they spent some time trapped in a Spur-throated locust swarm (somewhere on the Sandover Highway) and have taken lots of photos. **Moazzem Kahn** got his PhD passed.

CSIRO Entomology - Australian Cotton Research Institute

An important development is that with **Garry Fitt's** appointment as CEO of the CottonCRC, responsibility for his projects has been assumed by **Geoff Baker** (CSIRO Ento) based in Canberra. Geoff is now responsible for all *Helicoverpa* related work in the Division. That includes **Simon Duffield's** project at Griffith and work on viruses. They are still trying to find a replacement for Garry based here at Narrabri. Garry will still be involved in a strategic sense with all the Narrabri projects, but retain direct involvement with the transgenic cotton work.

Nancy Schellhorn who commenced in the group about a year ago has spent the past two months working at the Waite on a collaborative project on parasitoids. Nancy joined CSIRO Ento at Narrabri from the US as a Postdoc to work on the ecology and management of parasitoids as a component of IPM. **James Lytton Hitchins** left in March after completing a three year Postdoc on soil predators and their impact on cotton pests. He will be replaced with a new Postdoc (soon to be advertised) to work on early

season impacts of beneficial species in cotton IPM. **Colin Tann** is currently in the inland (with **Peter Gregg**) surveying *Helicoverpa* populations in the Simpson Desert - Alice Springs regions. They hope to make a prediction of the likely magnitude of *H. punctigera* migrations in the spring. Rainfall and vegetation patterns suggest a large populations are possible.

NSW Agriculture - Elizabeth Macarthur Instiute, Camden

Grant Herron recently reviewed most chemical controls for western flower thrips in Australia a painful job. He had to try and please industry and all state Departments of Agriculture representatives. The review was in response to the imminent expiry of all the chemical control permits.

NSW Agriculture - Tamworth Centre for Crop Improvement

Emma Cottage and **Robin Gunning** recently attended the Australian Entomological Society conference in Darwin. We had a great time! **John Hosking**, **Royce Holtkamp** and **Paul Sullivan** are continung to research biological control of weeds. Emma and Robin are looking forward to attending the International Congress of Entomology in Brazil, however, Rex and Marcel are not pleased about having to stay at home.

Robin GUNNING
Regional Councillor

The University of Sydney, Orange

The Pest Management Group on this campus, formerly Orange Agricultural College, The University of Sydney, comprises seven staff and PhD students. Current research focuses primarily on biological control of arthropods and weeds, 'soft' pesticides, and host-plant resistance. **Steve Wratten** (Lincoln University, NZ) has been appointed Visiting Professor, a move that will cement his relationship with the Group. The book he and **Geoff Gurr** have been editing, 'Biological Control: Measures of Success', is - at long last - with the publishers who promise it out in the Spring (we think they mean the Australasian spring!). **Raman Anantanarayanan** continues his weed biocontrol work and recently secured funding to visit the University of Nebraska to assay the source-sink relationship in the parthenium shoot system using stable isotope ratio methodology. **Geoff Gurr** recently visited biological control groups in Britain, Switzerland and The Netherlands learning more about carrots and sticks (mostly carrots) being used to convince farmers to lessen agricultural inputs and encourage on-farm nature conservation.

Wang Jinzhong of Beijing Agricultural College recently visited the group to explore scope for using traditional Chinese herbs as sources of botanical insecticides. **Zamir Hossain** is finishing his thesis on enhancing biological control of lucerne pests by habitat manipulation. **Leigh Pilkington** recently started his PhD investigating the pathogen and vector (leafhopper?) responsible for Lucerne yellows disease. This is in collaboration with **Murray Fletcher**, **Alex Nikandrow** and **Eric Elliott** (NSW Agriculture) and **Karen Gibb** (Northern Territory University). **Donna Read** joined the group in support of this project.

NSW Agriculture,
Orange Agricultural Institute

Murray Fletcher would like to thank all those people who enquired about his health after the report in the last *Myrmecia* that he had been unwell. The report was the result of the editor trying to access my NSW contribution only to find I was off sick that day. I am much better now thank you, [The editor should point out this NSW contribution was the final one received before going to press.]

Graham Thwaite was one of many participants in a meeting at the Institute for Horticultural Development, Knoxfield in early July to workshop a major apple and pear industry project on Integrated Fruit Production (IFP). The main component of IFP (at least in Graham's biased view) is integrated pest management. The meeting was convened by Agriculture Victoria entomologist **David Williams** but there was a scarcity of entomologists from other states. Absence on holidays was the most popular excuse!

Former Bathurst-based student researcher, **Adrian Nicholas** who is currently at the Yanco Agricultural Institute, received news recently that he will be awarded his PhD by the University of Western Sydney. Congratulations, Adrian.

A recent review of legislation in NSW examined the value of retaining the Agricultural Scientific Collections Trust Act which provides statutory protection for the entomological and herbarium collections within the Department. Arguments in favour of retaining the Act included highlighting the scientific value of the collections as having a specific focus towards insects, mites and pathogens associated with agricultural activity in NSW. As such, these collections are not simply duplications of the biodiversity collections housed in the Australian Museum or the National Herbarium of NSW. The benefits of having an independent Trust representing agricultural, industry and academic interests as an advisory and monitoring

body were also highlighted. A suggestion that the role of our Trust could be subsumed by the Australian Museum Trust or the Botanic Gardens Trust was parried on the grounds that the focus and interests of our Trust are quite different from those of the other Trusts which represent conservation, environmental, education and other interest groups. Our Trust would be just as inappropriate to oversee the Museum collection. As a consequence, the review has decided that our Trust Act should remain.

Murray Fletcher and **Danuta Knihinicki** attended the Darwin conference and both thoroughly enjoyed the interaction that this provided. Murray presented a paper in the quarantine section on leafhopper incursions and Murray and Danuta both had poster presentations. Danuta spent two afternoons working at Berrimah Farm with **Lanni Zhang** and others on their mites and Murray spent half a day at both Berrimah Farm and at the Museum doing leafhoppers. It was good to catch up with old colleague **Graham Brown** and seeing how he was getting on in the Top End.

The Plant Health Diagnostic Service was launched on July 3 and all diagnostic work undertaken by the Department now attracts a charge based on full cost recovery. Work undertaken as part of our own research interests, which include leafhoppers, thrips and mites, will not attract a charge unless identifications are carried out as a purely diagnostic service, in which case there will be a charge.

Visitors to Orange have included **Noel Tait**, and **Dinah Hales** from Macquarie University. Noel presented a public lecture on velvet worms (Onychophora) as part of an international palaeontology conference "Palaeontology Down Under" held at Kinross Wolaroi School in July. The talk was very well received, as all talks Noel presents usually are, and highlighted the extraordinary reproductive strategies adopted by both the male and female peripatus, including the species that is only known from Mount Canobolas in the Orange district. He justified the relevance of his topic to a palaeontology group by describing the velvet worms as living fossils. Dinah's trip to Orange was to attend a meeting of the Agricultural Scientific Collections Trust.

Murray FLETCHER
Regional Councillor

Australian Museum

Max Moulds and **Margaret Humphrey** visited Christmas Island last December to collect cockroaches for molecular studies. Max also attended the Council of Heads of Australian Entomological Collections (CHAEC) in Darwin in June, and managed to fit in some field work, although collecting was not very rewarding. **Dan Bickel** spent time in Costa Rica to attend a workshop as one of 15 international experts participating in a survey of Costa Rican Diptera. In January this year Dan attended the 3rd Southern Connections Conference in Christchurch, New Zealand, and presented a talk on Gondwanan dolichopodid flies. **Courtenay Smithers** visited La Trobe University to arrange for the transfer of a large part of the Thornton collection of Psocoptera to the Australian Museum.

The Entomology dry collection and lab area is getting a new air conditioning system in the near future which will provide much needed humidity control and extraction of napthalene fumes. A new compactus system for the Entomology and Arachnology spirit collections is also nearing completion.

University of Sydney

After serving the University of Sydney for 34 years, **Fred McDonald** retired on February 24, 2000 and on April 15 was given a farewell dinner. Sixty-eight people attended and there was a good mix of entomologists, close friends, and colleagues - the categories not mutually exclusive. It is an understatement that Fred will be greatly missed. There are no current plans to have his position filled.

University of Western Sydney

G Andrew Beattie and **Robert Spooner-Hart**, together with UWS project members **Duncan Watson** and **Debbie Rae** participated in a project workshop and review of the ACIAR project "Integrated control of citrus pests in China and Southeast Asia" in Hanoi in early June. **Max Whitton** was one of the review team, and joined **Paul Ferrar** and the other Aussies in a rousing Waltzing Matilda on the banquet night. Prior to the review, Andrew visited Sarawak and Thailand, and Robert met staff at South China Agricultural University, Guangzhou.

The newly moulted Beneficial Bug Company (emerging from Hawkesbury IPM, and under the directorship of **Dan Papacek** and **James Altman**) is currently expanding its facilities. **Andy Ryland** remains the Technical Manager and contact person for those requiring beneficials or monitoring.

Robert SPOONER-HART
Regional Councillor

NORTHERN TERRITORY

DPI&F Entomology Branch

Things are almost back to "normal" following the AES Conference in late June. All members of the Branch put in an inordinate amount of effort in the period leading up to and during the week of the meeting.

Leading from the middle of the back row,
Chairman Graham Brown flanked by Colin Wilson and Alan Anderson
together with their highly successfull Darwin 2000 organising team

The behind the scenes work largely goes unnoticed, but the sterling efforts by **Deanna Chin, Michael Neal** and **Haidee Brown**, ably supported by **Lanni Zhang, Heather Wallace**, **Elliott Crowson** and others such as **Angela Profke, Hazel Brown** and **Tony Hertog** managed to keep the presentations flowing and on time. None of the glitches were caused by our team, but all attempted to rectify the situations using unfamiliar equipment and systems known only to the University technicians of whom, **Steve Hall** was a tower of strength whenever he was available.
Funding for Heather Wallace's position could not be sustained and after 5 very valuable years with the Branch, she has been transferred to the NT Museum. Her desire to learn something new, and ability to turn her hand to most tasks, will be sorely missed. Most of her jobs will now impinge on Haidee and Deanna's heavy workload. Haidee Brown continues as the collection and database manager and will definitely notice Heather's absence.
Megan Hoskins manages to maintain her hectic schedule of handling all vegetable, fruit tree, field crop enquiries and monitoring various crops, including cotton in Katherine. How she does it, nobody except Megan can determine, but she appears to thrive on the demands put to her. **Graham Young** and **Michael Neal** continue the *Mastotermes* work, with most of the field work being conducted also in the Katherine area. In the search for an alternate chemical to the organochlorine mirex, several exciting developments are in the pipeline.
Elliott Crowson continues to have a mixture of quarantine and extension duties but is gradually easing out of the arduous "first point of contact" extension position to the growers of Asian Vegetables. This reflects the changing roles in this area as a new industry-based Vietnamese speaking extension officer has recently been appointed.
Graham Brown has acted in the Branch Head position during the absence of **Stuart Smith** who has been seconded to carry out some of the work previously handled by **Ted Fenner** as Chief Quarantine Officer (Plants). Graham is now responsible for the identification of all AQIS interceptions which have increased markedly due to the traffic in and out of East Timor, at this stage all channelled through Darwin. Ted has officially retired, but will be on long service leave for a while yet and will be on call for some duties and advice, especially concerning the new draft legislation.
Deanna Chin, Haidee Brown and Stuart Smith worked to produce a Core Display poster which will do the

rounds of the Show circuit in July. Prior to this, Deanna, Haidee and Heather had put displays for the Fred's Pass Show in early May and Deanna and Graham Young also were rostered to man the display.

Stuart Smith and **Nick Perepelecia** from South Australia visited Broome in early May, just after a late cyclone had damaged the town to discuss the Ag WA eradication pilot program against Medfly. Three weeks later, in early June, Stuart was in Mauritius attending a European Union sponsored fruit fly Symposium at which he delivered three presentations.

NT University

Ros Blanche is now into the third and final year of her NTU Post-Doc Fellowship. Ros is searching for leafhopper/planthopper vectors of phytoplasma diseases in grasses in northern Australia. These phytoplasmas are a potential threat to sugarcane in Australia. The work has involved lots of field trips in the Darwin/Douglas Daly area and in northern WA (especially the ORIA). **Janine Lloyd**, the project's new part-time research associate, is currently rearing an insect, *Chiasmus varicolor*, that tested positive for a phytoplasma in couch grass that is almost identical to the one causing sugarcane white leaf disease in Thailand and Taiwan. **Grey Coupland** is currently sampling the insect fauna of mangroves near Channel Island as part of her PhD project.

Martin SHIVAS
NT Regional Councillor

QUEENSLAND – NORTH

NAQS - Entomology

During June, Papua New Guinea NAQIA (National Agriculture Quarantine and Inspection Authority) Entomologists **Marjorie Kame** and **David Tenakanai** visited our offices as part of a NAQS funded liaison trip to north Queensland. David has been the PNG entomologist on several NAQS surveys of New Guinea. Marjorie is the new NAQS liaison person, helping to keep the PNG component of our work running. Marjorie picked up general curatorialskills and played in the insect collection with **Kylie Anderson**, whilst David spent time with **Kerrie Huxham** using CABI-key for the Indo-Australasian Dacinae fruitflies. **Judy Grimshaw** provided literature on silverleaf whitefly and *Varroa* mites, as well as explaining the NAQS survey process, from target lists, to keeping 'tabs' on the specimens all the way through the identification process to the database and reporting system. The pair left with bags full'o books (courtesy of ACIAR – thanks Paul).

Kerrie Huxham attended the 31st AES meeting, presenting 'Annual Detections of Exotic Fruit Flies in the Torres Strait' and holding the fort for **Anna Morrisen**'s poster 'Monsoonal winds as a mechanism of pest and disease incursions in northern Australia'.

Peter Whittle, newly appointed head of QDPI's Northwatch, made a brief appearance in our lab at the CTA (Centre for Tropical Agriculture).

QDPI - Entomology

Stefano De Faveri and **Keith Halfpapp**, both from the CTA, presented posters at the AES Conference. Stefs poster entitled 'Management strategies for sweet potato weevil *Cylas formicarius*', went down well, as did **Keith Halfpapp**'s 'A sampling technique for two-spotted mite in papaya'.

Ross Storey gave a talk on insects and entomology to trainee Savanna Guides at the Mareeba CTA. The audience included the internationally known conservationist **David Bellamy** who has given much support to the setting up of the Mareeba Wetlands Foundation and Reserve.

Jack and **Sue Hasenpusch** have unfortunately had to close their Rainforest Museum in Kuranda. A downturn in the tourist trade in Kuranda was largely responsible. The Hasenpusches will concentrate their efforts on their Insect Farm at Garradunga near Innisfail but have not given up on the idea of reopening their museum at some stage in the future.

QDPI - Northwatch

Peter Whittle (formerly BSES) joined the Northwatch team as project leader in May, filling the vacancy left by the departure of **Neil Sing**. Peter has approached his position with feet running. **Paul Dangerfield**, **Mark Stanaway** and **Martin Gunther** conducted the June Northwatch Survey for exotic insect pests and diseases of plants in Cape York Peninsula with no new finds of exotic pests. They are happy to report that they are receiving good levels of community support from Cape York residents. **Sharyn Foulis** and Mark Stanaway attended the AES Conference, presenting an impromptu talk on Northwatch activities.

Mark Trinca is spending July to September on holiday in Europe, after co-ordinating the fruit fly blocking program in the Torres Straits this summer.

The Cairns based DPI Northwatch insect collection is building up a to a significant number of specimens. Material hails from the extremely interesting and diverse region of far north Queensland. Most is sorted to at least family level, and is mounted or in spirit. Specimens can be loaned for scientific study if required. Contact Paul Dangerfield on dangerp@dpi.qld.gov.au.

DNR – North Queensland

Rachel McFadyen visited the Tropical Weeds Research Centre recently to discuss projects and check how the new *Parthenium* summer rust is progressing in north Queensland. **Dhileepan** presented outcomes of parthenium biocontrol evaluation to the AES in Darwin and has contributed to the Parthenium Containment meeting in Roma. **Marie Vitelli** is packing up her insect kit for a year to try her skills as a Landcare Coordinator. **Cathy Lockett** continues to produce large numbers of two introduced species of geometrid pupae each month for release onto the Western Downs woody weed, prickly Acacia.

JCU - Cairns

More AES attendees - **Simon Grove** gave a talk and poster on his study on saproxylic beetle assemblages in northeast Qld and **Nigel Stork** spoke on 'Insect diversity and its decline: global and regional perspectives'.

Kerrie HUXHAM
NAQS Entomologist Mareeba

QUEENSLAND - SOUTH

Peter Allsopp (BSES) attended the fourth Sugarcane Entomology Workshop of the International Society of Sugar Cane Technologists in Khon Kaen, Thailand, during February. The meeting was hosted by National Biological Research Center and Khon Kaen University. The workshop concluded that there were three areas in which collaborative work could make progress: screening material for host-plant resistance to different borers; preparation of dossiers on the main pests of sugarcane; and, development of training and skill-acquisition during the next workshop. Visits were made to the laboratories of the National Biological Control Research Center Northeastern Regional Center at Khon Kaen University and to sugarcane plantations and a sugar mill near Udon Thani. The use of insects as human food and the sampling of dishes of mealworms, grasshoppers, longicorn larvae and other arthropods were a 'highlight' for the non-Thais. Field experience of borer damage and the release of *Cotesia* parasites complemented this change of diet. While in Khon Kaen, Peter ran across **Banpot Napompeth** and **Manochai Keeratikasikorn**, both members of the society. Moles at the BSES station in Bundaberg report that Peter wrote his chairman's address in his office to the sounds of the Beach Boys on a CD player. Nothing wrong with that, except that he tried to sing along with the band. Peter was seen hobbling about sporting an impressive brace on a bung knee. He claims to have suffered the injury while nude sky diving. Who are we to doubt his word.

Iain Kay (DPI Bundaberg) is busy with his new project on *Heliothis* and fruit fly management in vegetables, which also involves **John Brown** (DPI Ayr) and **Annice Lloyd** (DPI Indooroopilly). He has been joined by **Paul Garland**. Paul has previous experience with papaya fruit fly and spiraling whitefly in Cairns. **Paul De Barro** and **Marc Coombs** (CSIRO) and **Subra** (DPI Bowen) talked to growers about silverleaf whitefly research in a series of shed meetings at Bundaberg in February. The whitefly has appreciated the warm, dry summer (no rain in this part of Queensland) and is present in large numbers on many crops. **Bruno Pinese**, **Keith Halfpapp** and **Stef De Faveri** (DPI Mareeba) visited Bundaberg in March to discuss progress on a joint sweet potato weevil project and to harvest a trial. Bruno and Iain then performed at a field day attended by about 40 sweet potato growers.

Frank Page (DPI Applethorpe) recently spoke to olive growers and prospective growers about the known pests of olives, primarily olive lace bug *Froggatia olivinia* Froggatt which is potentially very damaging, black scale *Saisettia oleae*, and Queensland fruit fly. Frank also had an enquiry about termite damage to young olive trees at Thargomindah, of all places! The trees were growing in a heavy black soil with some buffel grass ground cover and not another tree in sight. Needless to say such an environment is not ideal for olives. It is a rapidly expanding industry in Australia and warrants research into pest and disease management using an IPM approach.

Paul Grundy recently joined DPI as an entomologist at Biloela. Paul will be researching novel options for *Heliothis* control and looking at area wide management for the Dawson/Callide regions of Central Queensland. **Sherree Short** has joined Paul as his experimentalist in Biloela. Paul is currently wrapping up his Ph.D. evaluating assassin bugs against *Heliothis*. **Tonia Grundy** (Pauls' wife) also joined the team at Biloela as an information extension officer. This could be the start of a Grundy dynasty!

Errol Hassan (University of Queensland, Gatton Campus) is currently researching the efficacy of several, different Australian plant extracts against insects and diseases. Results to date have been favourable. In addition, Errol has several industry consulting projects relating to Neem and other organic pesticides. Errol is also supervising a PhD student studying integrated pest management of the Giant African Snail in PNG. Errol advises that the School

of Land and Food (UQ Gatton) has been renamed "School of Agriculture and Horticulture."

Brad SCHOLZ
Regional Councillor

UQ, Dept of Zoology and Entomology

Entomologists are thin on the ground at UQ this semester, with several lecturers on study leave. **Myron Zalucki** is on leave from 1 June - 14 October, and hastens to point out that the timing has nothing to do with rats and ships. Myron has visited Prof **Tim Paine** at UC Riverside and Prof **Steve Malcolm** at the University of Western Michigan (Kalamazoo) to work on monarch butterflies (what else!). He has just returned from the Darwin AES meeting feeling much lighter after the weight of executive responsibility was transferred to the Melbournians. As a last gasp of vice-presidential effort, Myron will be travelling to the International Congress of Entomology in Brazil this August to bid for the 2004 ICE. Then he's off to China on an ACIAR project visiting Professor **Liu Shusheng** at Zhejiang University (Hangzhou) as well as going on a "foreign experts" junket to Shandong province. Myron is currently hiding out at his old stomping ground in Environmental Studies at Griffith University. **Dave Walter** and his Ph.D. student **Matthew Shaw** spent a few weeks in the glory that is Ohio, teaching and studying at the renowned Acarology Summer School. Dave taught the Endeostigmata and Mesostigmata sections of Soil Acarology, while Matthew laboured long into the night at Med-Vet boot camp. Rumour has it that Matthew has been awarded the Hoogstral Award for being the most dedicated young acarophile of the season. Dave is also on study leave, and is currently visiting old cronies at Colorado State University where he is beta-testing LucID keys to soil mites. Then he's off to commune with **Jerry Krantz** at Oregon State University before returning to Brisbane.

The dipterists are also dwindling. **Shaun Winterton** has taken up a post doc in North Carolina. He flew out of Darwin after delivering his talk as winner of the Phil Carne Prize and damaging his liver on various intoxicating substances. **David Yeates** has resigned from UQ Zoology and Entomology and will relocate to Canberra. We wish him well, and would like to know whether he needs any help depleting his wine cellar before heading south. Despite these losses, fly business goes on. The first committee meeting to organise the 5th International Congress of Dipterology met in March. The Conference will probably be in Brisbane from 29 Sept - 5 Oct in 2002. More information will be available by the end of the year. **Margaret Schneider** was officially awarded a doctorate for her thesis "Systematics of Australian Conopidae (Insecta: Diptera)" on the 19th of April. Congratulations Margaret! But rising to the heady heights of doctorhood hasn't slowed her down. Dr **David Headrick**, from Department of Crop Sciences, California Polytechnic State University and two of his postgrad students visited Margaret and **Dan Papacek** (Bugs for Bugs) from 15-23 July. The primary purpose of the visit was to investigate current work on parasites of citrus pests. During the week 24 - 28 July, three Plant Health Scientists from Irian Jaya will visit UQ Entomology and QDPI Plant Pathology for a workshop conducted by Margaret Schneider (insects), **Roger Shivas** (plant pathogens) and **John Swarbrick** (weeds). The purpose of the workshop is for the three Indonesians to participate in the development of a training course to be run later in the year to strengthen quarantine in Irian Jaya. The project is funded by AQIS.

Dave Goulson has returned to the UK after a prolonged and very productive sabbatical at ZEN. Was it a paper a week? **Paul Cunningham** has managed to snaffle a CRDC grant to work on learning in *Helicoverpa* and so will hang out in Oz for the next 3 years...we may need to offer citizenship. **Marie-Louise Johnson** has joined the Entomology program to work on *Helicoverpa* larval foraging behaviour as part of the State Government Initiative to combat this pest. **Andrew Manners** will start honours mid-year after working with Nancy Shellhoune at Narrabri.

A seminar on the evaluation of a school-based dengue haemorrhagic fever education programme in the Muang District, Khon Kaen Province,Thailand was held at QIMR in March, chaired by **Joan Bryan**. Several of Joans' students, **Thao Chau**, **John Fortin**, **Sokrin Khun** and **Hoa Nguyen**, presented their work.

In April **Ana Notarte** submitted her Master of Agricultural Sciences thesis on the in vitro rearing of *Trichogramma* in cell line based diets. She has returned to the Philippines to her position at the Provincial Agriculturist and Cooperative Office, Tagum City.

Deling Ma visited China with Prof **Gordon Gordh**, **Malcolm Wegener** and **Michael O'Shea** during May. They visited Hainan and Yunnan to see neem plantations and extraction technology and will also have several meetings. In addition, Ma will be going to Shandong, his home Province, to see his colleagues in the Shandong Academy of Agricultural Sciences and plan for Myron Zalucki's visit in September.

Griffith University

Heather Proctor has just returned from an enlightening but exhausting course on the taxonomy of oribatid mites held at the Ohio State University. She was disappointed to discover that elves had not finished identifying the thousands of Hydracarina passed on to her from the DNR's Monitoring River Health program. Who would have thought there could be such a thing as 'too many water mites'? However, the *Mites in the Rainforest* poster - a joint effort between HP, **Dave Walter** (UQ), artist **Janet Hauser**, ABRS, and Environment Australia - is finished and is ready to be sent to those who appreciate the beauty and diversity of small things.

The **Tropical Fruit Fly Research Group** is buzzing with activity on taxonomic and ecological fronts. **Dick Drew** is busy as ever with his taxonomic research on the dacines. With the aid of **Meredith Romig** and **Amy Lawson** these bugs are getting an artistic and scientific makeover. The PNG fruit fly project is also proving fruit(fly)ful and the speciose fauna of this region is keeping **Dan McGuire** and **Barbara Clifford** glued to their microscopes, sifting through several thousand flies per day. In addition there is the unending stream of identification requests from around the world. **Ann Beames** is battling blurry eyes and a sore thumb, still gunning for the record of most number of flies pinned in a single day.

On the ecological front, Ph.D. student **Narelle** "the tephritines are so cute" **Power**, has been assaulting the last of the winter crop of fireweed in search of flower-head infesting tephritids. Whether or not tephritines have the potential to control fireweed, we certainly have a biocontrol agent in Narelle. **S. Raghu** (PhD student) has been spending his time staring at plates trying to make sense of the microbial flora associated with dacine fruit flies and their host plants. He is also working on a critique of lekking theory that will give him a permanent reputation for iconoclasm. **Myron Zalucki** (University of Queensland) is spending 2 months with the group, primarily to do some non-fruit fly work. Myron and **Tony Clarke** are putting together an Annual Review of Entomology article on mortality in first instar lepidopteran larvae. **Anantanarayanan Raman** (University of Sydney) also visited us for a day to discuss, among other things, the ecology of galling tephritids.

Heather PROCTOR
Regional Councillor

SOUTH AUSTRALIA

Australian Water Quality Centre

Not satisfied with the macroinvertebrates of South Australia, staff at AWQC have been getting to grips with creatures from wetlands of the Murray-Darling system in different parts of NSW, after successfully tendering for work to identify macroinvertebrates for the NSW Department of Land and Water Conservation. Most taxa are widespread and familiar to us but several genera not found in SA have been encountered and new species in widespread genera have also been identified. Some taxa such as the chironimid *Monopelopia* (found as larvae) occur in a wider area than previously recorded.

Field work this year for the Ausrivas group has been restricted to the 15 sites we have sampled since 1994. These are at least widespread in the State and we have been to Cooper Creek at Callyamurra Waterhole (where the bugs are much more abundant with the flooding in the past few months) and also Rocky River on Kangaroo Island. While on KI **Paul McEvoy** and **Chris Madden** collected some *Promochlonyx* (Chaoboridae) larvae in a temporary swamp pool. According to Colless (1986, Aust. J. Zool. Suppl) this genus has not been recorded in South Australia before. Paul McEvoy has completed his work on aquatic worms in South Australia and has produced a poster with **Adrain Pinder** (DCLM, WA) cataloguing his finds. **Daria Schulze** took the poster to the Australian Society for Limnology conference in Darwin in early July. The poster will also travel to Spain later in the year for the International Symposium on Aquatic Oligochaeta in Bilbao (unfortunately none of us will!!).

Insect Behaviour and Biological Control Laboratory, Waite Campus, Adelaide University

Esmeralda Dols from **Jacques van Alphen**'s lab (Lieden Univeristy, the Netherlands) based her Australian collecting trip in Mike's lab in April. She visited South Australia, Victoria and Queensland in her quest for geographic strains of *Asobara persimilis*, a parasitoid of *Drosophila* species. Thanks to **Stephen Goodwin**, she also got a strain from New South Wales.

Graham Walker (Crop & Food Research, Auckland) stopped in Adelaide in June to discuss research and extension work on management of diamondback moth and other crucifer pests.

Ph.D. student **Vanessa Cavagnaro** visited her second supervisor **Geoff Baker** (CSIRO Entomology) at the end of June where she trawled through Geoff's extensive reprint collection on snails and tried to survive the cold Canbr-r-r-ra winter.

Nancy Schellhorn has been visiting **Mike Keller** and establishing collaboration on conservation of natural enemies. **Brigitte Tenhumberg** has migrated northward with her husband **Drew Tyre** where they will continue their ecological modelling work with **Hugh**

Possingham. Two of **Mike Keller**'s postgraduate students **Kaye Ferguson** and **Darryl Jackman** presented papers at the Darwin Conference. Kaye presented a paper on the quandong moth, and Darryl on Kelly's citrus thrips, *Pezothrips kellyanus*.

Insect Systematics and Biodiversity Laboratory, Waite Campus, Adelaide University

Andy Austin and **Mark Dowton** (Wollongong Uni.) presented papers at the Evolution 2000 conference at Indiana University in Bloomington Jun 23-27. Whilst in the US, Andy took the opportunity to catch up with **Peter Cranston** and **Penny Gullan** at Davis. Peter is now on his way to a long-held dream - he owns some grape vines and all of his many wine-drinking friends back here in OZ are looking forward to the first vintage!!

In June, **Muhammad Iqbal** met with **Margaret Schneider, Dave Walter, Greg Daniels, David Yeates**, *et al.* at the University of Queensland to discuss the final stages of production of a LucID key to Hymenopteran families of Australia as part of the BioED program.

David Swofford of PAUP fame made a brief visit to Adelaide in July and held discussions with **Andy Austin**, **Muhammad Iqbal**, **John Jennings** and many others before presenting a seminar to an eager audience at Adelaide University.

Andy Austin, John Jennings, **Iqbal,** and **Nick Stevens** have been busy preparing data to add some of the smaller Hymenopteran families such as Megalyridae, Stephanidae, Evaniidae, Aulacidae and Gasteruptiidae to the ABIF data-base. For those who haven't checked it out, the ABIF web address is http://www.anbg.gov.au:80/abrs/abif.htm.

John Jennings attended both the CHAEC and AES meetings in Darwin. He reported that the Duncan Swan Insect Collection (WARI) now has its own home page at http://www.waite.adelaide.edu.au/~miqbal/wari.html.

Jo Kent will be at UQ for the next six months where she will be doing illustrations of mosquitoes for **Des Foley**'s LucID key (part-time) and the rest of the time will be continuing with her PhD under the supervision of **Glenn Graham**, in the Centre for Identification and Diagnostics (CID). Her project is entitled "The systematics of the *Culex sitiens* subgroup species complex".

National Science Week

Many different groups based at the Waite Campus were involved in a highly successful National Science Week. Among the activities, SARDI staff had a display of snails and their biological control agents, and live displays of European and paper wasps, all of which attracted quite a bit of attention from passing staff as well as the students. Students were able to handle the various life stages of the European wasp as they removed them from newly excavated nest combs. One student asked whether the wasps could get out of the cage, and when promptly assured that they couldn't, she commented "That's what they said in Jurassic Park!"

Claire Stephens, **Nick Stevens**, together with a team of enthusiastic volunteers conducted a series of successful activities with about 40 high school students promoting insect diversity and demonstrating aspects of their (insect!!) behaviour.

South Australian Research & Development Institute - Entomology, Waite Campus

SARDI entomologists **Greg Baker, Peter Bailey, Angela Lush, Jianhua Mo,** and **Glenys Wood** presented papers at the Darwin Conference. They were overwhelmed by northern sunshine and hospitality but were all the time worrying about those who had to remain in the Adelaide winter to hold the fort.

John JENNINGS
Regional Councillor

TASMANIA

University of Tasmania
School of Ag. Science/CRC for Sustainable Production Forestry

Hilton Redgrove commenced his PhD in May and is currently identifying the various *Heteronyx* spp. recovered from plantations last summer. **Luke Rapley** is scoring autumn gum moth damage in genetic trials of *E. globulus* in the north of the state. **Michael Lang's** honour's project on blowfly activity and their utilisation of possum carrion is in full swing with 1000's of flies being sorted in the lab. **Owen Seeman** and **Geoff Allen** have sent off last year's collection of bumblebee for microsatellite analyses of their genetic diversity to **Paul Schmid-Hempel** in Switzerland and were relieved to hear that all arrived in fine condition. Congratulations to **Karina Potter (TIAR)** who was awarded a Queen's trust grant to undertake three month's research in the Netherlands (University of Leiden) on genetic variability of ragwort toward her PhD on the biocontrol agent, ragwort flea beetle. Visitor's have included **Dr David Penman** (Landcare Research, NZ) who discussed common research issues with **Geoff Allen** and **John Ireson** (TIAR).

Department of Primary Industries, Water and Environment

Lionel Hill and new vegetable IPM officer **Felicity Wardlaw** have been rearing *Plutella* in field cages through winter to elucidate the relative contributions of local and immigrant individuals to the local phenology of this brassica pest. Moths emerging in June had very dark colouration. These individuals and field emergences that we hope to achieve in early spring will be compared with individuals trapped in spring to see whether they vary greatly in colour. This may provide a simple means of distinguishing locals from immigrants. Lionel attended the third annual workshop of the national HRDC project on pests of sweet corn. He and **Jean Bentley** have developed last summer's field work into a Best Management Option for local sweet-corn growers. Tasmania shared a bumper crop of *Helicoverpa armigera* with other southern regions last summer. This provided an excellent environment for field work. Lionel is currently establishing a field trial to investigate whether the slug *Deroceras reticulatum* causes yield loss in pyrethrum crops by browsing on the emerging flower shoots.

Specialist Agricultural Services

Bob Hardy reports that the very dry conditions have favoured some important pests. These include the wingless grasshopper which reached record level (100 per square metre) in the drought effected Upper Derwent Valley and caused spectacular and devastating defoliation of new pasture growth in those areas where there was an opportunity to irrigate. Some moths have also reached very high numbers. In particular the chevron cutworm, *Graphiphora intermixta*, has cause severe defoliation of recently planted strawberries. Populations of fruit tree borer moth, *Cryptophasa albacosta*, have built up considerably in cherries. Bob is keen to gain further information on *C. albacosta* and would like anyone with information on the detail of the biology and control of this pest to contact him at specialist@trump.net.au.

Forestry Tasmania (FT)

Dick Bashford attended the AES Darwin conference and CHAEC meeting, presenting posters describing his and Marie Yee's projects on log insect and fungal inhabitants at the Warra Long Term Ecological Research site. With **Steve Candy's** economic impact models now complete, **Jane Elek** is documenting the IPM program that Forestry Tasmania uses to prevent chrysomelids causing economic losses. The few autumn gum moth around in Ft plantations were enough to assess that the biological insecticide, Success, should be successful against autumn gum moth as well as chrysomelids. Jane and Dick joined with **Marina Hurley, Hilton Redgrove** and **Peter McQuillan** for a workshop set up at DPIWE by **Margaret Williams** on identifying the Melolothinae scarabs that are posing a new threat to newly-planted eucalypt plantations. Species that Peter had previously recorded as rare have been found in large numbers in plantations. **Owen Seeman** has been employed for the past couple of months 'invertebrate salvage sampling of regeneration coupes' in the Florentine Valley.

Geoff. ALLEN
Tasmania Councillor

VICTORIA

Institute for Horticultural Development, Knoxfield

Peter Ridland and **Nancy Endersby** travelled to Indonesia in April to participate in the vegetable project component of the Victorian Government's Assistance Program for Indonesia. The Overseas Projects Corporation of Victoria is managing the project and **Wendy Morgan** is leading the vegetable project component. The Victorians visited **Peter Ooi** and his team in Jakarta who run the FAO Programme for community IPM in Asia. They also had discussions with **Elske van de Fliert** and others at CIP Bogor as well as a group meeting with numerous scientists from IPB (Agriculture University) Bogor to identify areas for collaborative R&D projects in vegetable IPM. They then travelled to Lembang Research Institute for Vegetables and delivered a pilot IPM workshop to 20 *Brassica* growers with assistance from the RIV's senior entomologist Dr Sudarwohadi. Further IPM workshops are planned for other regions of Indonesia (East Java, North Sumatra and South Sulawesi) for farmers and new vegetable extension staff. Peter returned to Bogor in June to begin planning for a joint project on pea leaf miner, *Liriomyza huidobrensis* on potatoes.

Graham Walker from Crop & Food Research, Auckland, New Zealand, visited Nancy Endersby and Peter Ridland to talk about common interests in diamondback moth research and implementation of IPM. **Beth Russell**, IPM Modelling Network Coordinator from CSIRO Entomology, Indooroopilly, also called in on DYMEX business.

In June, Peter Ridland travelled to Bowen, Queensland, for the national HRDC sweet corn pest management project meeting and then flew to Darwin to join the large IHD contingent attending the 31st AGM & Scientific Conference.

Mali Malipatil and **Kyla Finlay** from the Systematic Entomology Unit presented a paper "Ensuring market

access by upgrading pest and disease records and databases - a Victorian government initiative project" at the AES conference in Darwin, and they also attended, Kyla as an observer, the annual meeting of the Council of Heads of Australian Entomological Collections held prior to the conference. Mali visited the Northern Territory Museum and NT DPIF collections to examine the specimens of certain lygaeid and mirid bugs as part of his current taxonomic studies on these.

'Entomology from the Educational Perspective' was the subject of **Alison Medhurst's** presentation at the Darwin conference. Bernadette Swanson followed with a case study of the Western Flower Thrips workshop with an update on the National Strategy for the Management of western flower thrips and tomato spotted wilt virus.

DeAnn Glenn has accepted the Programs Manager position with the Grape and Wine Research and Development Corporation starting in August. She will be moving to Adelaide with her family in January.

Insitute for Sustainable Irrigated Agriculture, Tatura

The Entomology team from ISIA found the Darwin conference to be very interesting and relevant to their work. **Mofakahar Hossain** presented a paper on *Carpophilus* Beetle and **Alex II' Ichev** presented a paper on Oriental Fruit Moth. **Cathy Mansfield** presented a poster on the IPM Fresh Market tomatoes project. 'It was great to link up with entomologists from all around Australia and we look forward to the next conference.'

Sunraysia Horticultural Centre, Irymple

LeAnn Beanland has been looking for the insect vector of the Australia grapevine yellows phytoplasma. She presented the results of her work at the Darwin conference. While in Darwin, she visited **Karen Gibbs'** laboratory at the Northern Territory University to learn more about the phytoplasma research under way there. She and **Ros Blanche**, a post-doctoral fellow in Gibbs' laboratory, have plans to collaborate on a phytoplasma / vector research project.

Museum Victoria - Entomology and Invertebrate Survey

Many of you have visited the Victoria Crescent annexe site in Abbotsford over the last 20 plus years. This site is closing down, and during July and August, the collections are being moved to the new Melbourne Museum building in the city. The new museum is situated behind the Royal Exhibition Building in the park bounded by Victoria, Rathdowne and Nicholson Streets. Some staff have already moved into the new building, and the survivors at Abbotsford will leave in early August. Please stop using the Abbotsford address and use the new postal address for correspondence: Museum Victoria, GPO Box 666E, Melbourne, Victoria 3001. We will advise you of new phone numbers (when we get phones). The e-mail addresses have not changed.

CESAR: Centre for Environmental Stress and Adaptation Research
La Trobe University

The CESAR Aquatic Culturing Laboratory is up and running. The lab has been commissioned to provide cultures of aquatic invertebrates for ecological biomonitoring experiments that will be the main focus of the biomonitoring group within CESAR. The lab consists of a constant temperature room with timed lights and filtered, incoming air. At present we have about 100, 20L tanks, but this capacity may be enlarged in the near future to approximately 180. The first animals to be cultured in the facility are Chironomid flies, which have an aquatic larval life stage. Four species have been cultured through the entire life cycle: *Chironomus februarius*, *Chironomus duplex*, *Chironomus tepperi* and *Kiefferulus intertinctus*. The lab is also experimenting with the culture of an indigenous Damselfly; *Ischnura sp.*, which may also be used for biomonitoring work.

Andrea White (Honours student) is working on a project to stress *C. tepperi* with sub-lethal doses of pesticides to see if this stress is manifested morphologically in the form of an elevation in Fluctuating Asymmetry (FA) levels within chosen chironomid traits, such as wing measurements and bristle numbers. Andrea requires a dedicated pesticide lab for this work and this has just been completed. **Jac Ward**, a PhD student, is starting experiments to assess the use of FA as a tool in biomonitoring of heavy metal affected urban wetlands around the northern suburbs of Melbourne. Jac will be initially concentrating on using chironomids as they are found mainly in sediments, where the majority of heavy metals are concentrated. Both students are being supervised by **Ary Hoffmann** and **Richard Woods.**

Wil Lennard, a Research Assistant with the group, whilst continuing with chironomid and other macroinvertebrate culture, is beginning a study of FA in the pest fish, *Gambusia affinis*, to assess the use of FA in fish species as a sub-lethal, heavy metal contamination indicator in urban wetlands. Both Urban Wetland projects are being run in conjunction with the Melbourne Water Corporation's **Vin Pettigrove**.

All these studies are part of the lab's initial program of experiments to assess the feasibility of using Fluctuating Asymmetry as a sub-lethal, early biomonitoring tool in aquatic environments.

DeAnn GLENN
Regional Councillor

Entomological Society of Victoria

As in many previous years the current Council was re-elected unopposed at the AGM with Ms **Jan Tinetti** relieving the Editor of his dual role as Secretary. In the absence of the President, **Ian Endersby** gave a talk on insect conservation in which he urged members to publish their own studies on distribution and biology as a way of breaking the vicious circle of: (need for flagship species to generate awareness and funding)-(need for funding to conduct research and surveys)-(need for research and surveys to nominate flagship species).

Prof. **Allan Kellehear** presented the annual Presidential address in June, entitled "*Them: Insects in Science Fiction*". It is the nature of the genre generally to present insect-like creatures as objects of terror which probably biases the general publics' attitude to the taxa we are trying to promote.

The Society nominated the Swordgrass Brown Butterfly Project for a World Environment Day Award as a worthwhile example of a voluntary community invertebrate habitat rehabilitation project. Competition was strong and the award was made to the Australian Trust for Conservation Volunteers.

Recent newsletters have included articles on Caper White migration, changes to Odonata nomenclature, and the text of our February talk on Fossil History on Insects. Visit us at http://www.vicnet.net.au/~vicento/ to see Society News; Synopsis of Orders; Insect Conservation and Other Links.

Ian ENDERSBY

WESTERN AUSTRALIA

Agriculture Western Australia/CLIMA

Debbie Thackray recently returned to work from maternity leave (after the birth of daughter Emily Rose) and has resumed her work on forecasts for aphid and virus epidemics in cereals and in lupins. She has also recently launched a new website: (http://www.agric.wa.gov.au/progserv/Plants/PlantVirology/Bydv/index.htm). This provides information on barley yellow dwarf virus (BYDV) and its cereal aphid vectors to support advisers and growers in their decision-making over management of aphids and virus in cereal crops. In June Debbie co-hosted a visit by **Richard Harrington** from Rothamsted Experimental Station in the UK. The visit was part of a GRDC funded international project 'Enhancing the knowledge and skills base in forecasting disease epidemics and pest outbreaks in crops and pastures'. Richard gave a series of seminars on forecasting and decision support, insecticide resistance and the effects of global warming on aphid populations, with illustrations of trends in aphid catches from the long running UK insect suction trap network.

Françoise Berlandier held discussions with Richard Harrington in June about their respective research projects and also the management of discipline excellence within their organisations. Francoise has recently been selected as discipline leader for entomology at Agriculture Western Australia. These positions were created for all disciplines within the agency to foster discipline excellence, and plans are being formulated to best approach this brief. It seems that the agency has recognised that in the process of restructuring and re-organising over the past few years, scientific excellence was somewhat overlooked. Thankfully they are now trying to amend that situation. Françoise has been awarded travel grants from both the Grains Research Council and the Grains Research and Development Corporation to undertake a study tour of South Africa and Brazil. In South Africa she will be visiting various entomologists at the Agricultural Research Council followed by the XXI International Congress of Entomology at Foz du Iguassu in Brazil in August. Before this, Francoise will be attending the National diamondback moth, *Plutella xylostella*, workshop to be held at Gatton, QLD, in early August. The workshop aims to formulate strategic plans for the newly-funded HRDC project "Implementing pest management of DBM" run by **Greg Baker** of SARDI.

Curtin University of Technology

Louise Williams has just arrived from Tasmania to commence a PhD program under the supervision of **Jonathan Majer** and **Francis De Lima** (Agriculture WA) which aims to evaluate new methods for disinfesting citrus prior to its export to Japan and other countries.

CSIRO Entomology

John Matthiessen visited laboratories in Bologna, Italy and attended the Third International Symposium on Environmental Aspects of Pesticide Microbiology at Monheim, Germany in July. The Symposium was particularly concerned with the production system sustainability implications of enhanced microbial degradation of soil-applied pesticides. This is a problem that is becoming increasingly common in Australia, with some unique examples of severity and

type.
Owain Edwards and **James Ridsdill-Smith** welcomed Richard Harrington to CSIRO to compare their research on the ecology and genetics of aphid populations in the UK and WA. **Tim Woodburn** and **Kathryn Batchelor** recently received 6 bridal creeper plants, infested with the rust *Puccinia myrsiphylli*, from **Louise Morin** in Canberra. The conditions for the initial inoculation were ideal in that a mild, humid night was followed by an overcast and humid day. The disease is progressing as anticipated, and pustules have already appeared on the field-inoculated plants. This fungal biocontrol agent is seen as complementing the bridal creeper leafhopper that has now been released at over 70 sites in WA. Damage at last year's release sites is becoming very obvious, with large patches of the weed appearing variegated due to insect feeding.

Owain EDWARDS
WA Regional Councillor

PAPUA NEW GUINEA

Lastus Kuniata, Senior Agronomist, Ramu Sugar Ltd has been awarded the Ph.D degree in Entomology by the University of Queensland. Lastus is the first PNG national to reach this milestone.
Marjorie Kame, a graduate of Biology Dept. at UPNG, has been appointed as Entomologist cum Liasion Officer at the National Agriculture Quarantine Inspection Authority (NAQIA). Another Biology Dept. entomology major graduate, **Tanya Zeriga** has been appointed as a rehabilitation Officer at Misima Mines Ltd.
The Mid Term Research Review of the Cocoa & Coconut Research Institute (CCRI) was held at Tavilo Research Centre, Rabaul, 18-19 May 2000, one morning being devoted to Cocoa & Coconut Entomology. Control of dynastid beetles is now the major activity for the coconut entomology programme. A significant development has been the identification of *Scapanes* pheromone. Efforts are currently concentrated around the development of synergist blends with the *Scapanes* pheromone to replace sugarcane as the syngergist material for mass trapping of *Scapanes*. The beetle has been continuously removed from Tavilo Plantation by trapping since the identification of *Scapanes* pheromone in late 1997. Preliminary results indicate a steady decline in the population of *Scapanes* and reduction in the number of palms attacked.
CCRI has a new director, Dr **James Kaiulo**, until recently the Vice-Chancellor of UNITECH, Lae. He localises the position formerly occupied by the veteran Cocoa specialist cum entomologist, **John Moxon**, who has reverted to his old job at LAES, Keravat after a seven year spell at CCRI. This period witnessed the rise of CCRI from a once tottering entity to the best run research institute in PNG.

Ray KUMAR
PNG Overseas Correspondent

EMPLOYMENT IN ENTOMOLOGY

EPIDEMIOLOGY AND THE DEVELOPMENT OF RISK ASSESSMENT MODELS FOR THE MANAGEMENT OF TOMATO SPOTTED WILT VIRUS IN POTATOES

Tomato spotted wilt virus (TSWV) is a very important pathogen of many horticultural crops and a sporadic but serious problem of potato in Australia. In recent years several major epidemics of TSWV induced disease have occurred in Australian seed and ware potato crops, resulting in significant losses. Currently there are no recommended management strategies for this disease directly applicable to this crop, nor any means of predicting likely outbreaks. Furthermore current certification guidelines may not be appropriate for this virus, as virus transmission to tubers is inefficient reducing the risk of carryover in seed. A scholarship is available as an important component of a continuing research program with this pathogen managed by Dr Calum Wilson. There will be some scope within current project arrangements for the successful applicant to tailor the project to suit interest, and significant technical support. The overall project outcomes include: the collation of detailed epidemiological data and development of a disease prediction system, likely using Geospatial analysis tools such as geographic information systems; the assessment of potential management strategies for control of virus infection and spread; the evaluation and analyses of resistance to virus systemic transport in potato. International collaboration with key research groups in the USA will be a feature of the proposed work.
This full-time Scholarship is offered for studies toward a PhD in the School of Agricultural Science at the University of Tasmania under the supervision of Dr Calum Wilson (Lecturer in Plant Pathology) and Dr Sarah Pethybridge (Research Fellow). Committed and self-directed candidates currently completing or having completed an Honours degree or an equivalent postgraduate degree in life sciences are invited to apply. The scholarship carries an annual stipend of $22,030 (indexed annually) for 3 years. A HECS Scholarship may also be available. The successful candidate would be expected to begin stud-

ies on or before 1 January 2001, but appointment may occur at any time after 1 September 2000.
For further information on the project contact Dr Calum Wilson, phone (03) 6233 6841, fax (03) 6226 2642, or email Calum.Wilson@utas.edu.au, or Dr Sarah Pethybridge, phone (03) 6430 4910, fax (03) 6430 4959 <Sarah_jp@postoffice.utas.edu.au>
For application forms contact the Scholarships Officer at Student Administration, phone (03) 6226 2766, or fax (03) 6226 7497;
email: <scholarships@research.utas.edu.au> or write to: Student Administration, University of Tasmania, GPO Box 252-45, Hobart, 7001.
Final applications close 31 December 2000, but prompt application is encouraged as early appointment may be made if a suitable candidate is identified prior to this date.

AUSTRALIAN COTTON COOPERATIVE RESEARCH CENTRE
Narrabri, NSW
Postdoctoral Fellow in Ecology
$46K - $52K plus superannuation
We are seeking a highly motivated person to investigate how key predators can contribute to the suppression of *Helicoverpa* spp in cotton. You will review literature and design, conduct, analyse and write up experiments in the field and the laboratory to address the effectiveness of predation, issues of diversity and competition amongst predators and interactions with various agronomic practices. The work will involve close cooperation with other ecologists and entomologists within the Australian Cotton CRC. The position is available until 30 June 2003.
You will require tertiary qualifications or equivalent experience in population ecology, insect biology or Integrated Pest Management and a demonstrated ability to conduct field surveys. You should have a record of achievement in completing and reporting on research projects independently. You should be prepared to live and work in a small rural community.
An Information Package including selection criteria can be obtained by phone from (02) 6246 4001, by fax from (02) 6246-4068, by email from <recruit@ento.csiro.au> and from our web site http://www.ento.csiro.au Applications should quote position Number T0750, list the names of at least three referees and be forwarded to The Recruitment Officer, CSIRO Entomology, PO Box 1700 Canberra ACT 2601 by 5 August 2000.

POSTGRADUATE ENTOMOLOGY PROJECTS:

Australian Survey 2000: Part I

This is part 1 of the third biennial survey of postgraduate and honours projects in Australian Entomology, and comprises 104 projects. By comparison there were 258 contributions in 1998, and 223 in 1996. Thanks to the Councillors and others (names in brackets before each entry) who collected the information and emailed it to me.
Many university departments, research groups and other institutions are not listed below. If you are not listed, please contact your regional councillor or me (lsilberb@metz.une.edu.au) so that your projects can be included in part II next issue.

Tish SILBERBAUER

NEW SOUTH WALES
Macquarie University
School of Biological Sciences
(Murray Fletcher)
ANDREW, Nigel R. (PhD) The potential impacts of climate change on *Acacia* feeding insects.

University of New England
Ecosystem Management Dept.
(Andrew Boulton & Lisa Lobry de Bruyn)
BOTTING, Sue (PhD) Invertebrates and water chemistry of the Macleay catchment.
FINN, Marcus (PhD) Invertebrates (includes aquatic insects) in streams with water extraction.
FINN, Marcus (Hons) Effects of weirs on stream invertebrates in Macquarie Marshes.
HANCOCK, Peter (Masters) Subsurface invertebrates and water chemistry in Hunter River.
HARLEN, Russell (PhD) Livestock Grazing on the Epigeic Community in Remnant Woodlands
MALAWKIN, Helena (Masters) Breakdown of rainforest and camphor laurel leaves in Brisbane River.
MOFFATT, Jen (Hons) Effects of sewage spills on invertebrate fauna in an urban creek.
NKEM, Johnson (PhD) The search for sensitive indicators of soil health: How do soil macrofauna perform?
VANDERWOUDE, Cas (PhD, conferred 2000) An evaluation of ant communities as indicators of ecological change resulting from anthropogenic disturbance in spotted gum *(Corymbia citriodora)* forests in south-east Queensland.
WATSON, Leah (Hons) Toxicity of antimony from tailing dams on stream invertebrates.

Zoology Department

(Mary Notestine)
JORDAN, Sydney (Hons) to begin in July 2000, probably something on spiders.
TERRY, Marcel (PhD) - Insect plant interactions.
Agronomy & Soil Science Department
(Olivia Kvedaras & Tish Silberbauer)
ANNETTS, Robert (PhD)\ Ways of integrating *Microplitis demolitor*, a native parasite of *Helicoverpa* spp., into cotton pest management systems. Based at QDPI, Toowoomba.
BAKER, Amelia (PhD) The influence of mites (*Tetranychus urticae*) on the physiology of cotton plants. Based at the Australian Cotton Cooperative Research Centre, Narrabri.
BRITTON, David (PhD) Developing novel attract and kill technologies for *Helicoverpa armigera*.
COTTAGE, Emma (PhD) Insecticide resistance in the silverleaf whitefly, *Bemisia tabaci*. Based at NSW Agriculture, Tamworth,
GRIFFITH, Brendan (M.Rur.Sc.) The mechanisms of resistance of *Helicoverpa armigera* to pyrethroid insecticides. Based at NSW Agriculture, Australian Cotton Research Institute, Narrabri.
JOHNSON, Marie-Louise (PhD, conferred 2000) The impact of predators on *Helicoverpa* spp. in cotton.
KHAN, Moazzem (PhD, conferred 2000) The ecology of the green mirid, *Creontiades dilutus*. Based at the Australian Cotton Research Institute, Narrabri.
KVEDARAS, Olivia Louise (PhD) The influence of host plants on the mating behaviour of the cotton bollworm, *Helicoverpa armigera* (Lepidoptera: Noctuidae).

University of Sydney, Orange
Faculty of Rural Management
(Murray Fletcher)
HOSSAIN, Zamir (PhD) Habitat manipulation for lucerne pests: strip-cutting to enhance biological control.
PILKINGTON, Leigh (PhD) Development of an integrated control strategy for the insect-vectored disease lucerne yellows in lucerne seed crops.

AUSTRALIAN CAPITAL TERRITORY
Australian National University
(Martin Steinbauer)
(* co-supervision, CSIRO Entomology)
*SHORT, Mark (PhD) Taxonomy and biology of hymenopteran natural enemies of autumn gum moth (*Mnesampela privata* (Lepidoptera: Geometridae)). Also: CRC for Sustainable Production Forestry
*WHARTON, Trudi (PhD) Biology and ecology of the exotic pine aphid, *Essigella californica* (Hemiptera: Aphididae). Also: CRC for Sustainable Production Forestry

NORTHERN TERRITORY
Northern Territory University
(Martin Shivas)
School of Biological, Environment & Chemical Sciences
COUPLAND, Grey (PhD) The significance of insects to tropical mangrove communities: insect importance to mangrove reproduction, recruitment and productivity.

QUEENSLAND
University of Queensland
Department of Zoology and Entomology
(http://www.uq.edu.au/entomology/student1.html)
AZAM, Golam Nabi (PhD) Invasion and colonisation of native habitats by exotic mites.
BOUCHARD, Patrice (PhD) Systematics and biogeography of the Coelometopini (Coleoptera: Tenebrionidae: Coelometopinae) restricted to the Australian wet tropics.
BRIER, Hugh (Masters) Soybean tolerance to bug attack.
BROUGHTON, Sonya (PhD) The effect of leaf insects on Lantana.
CEBALLO, Flor (PhD) An investigation of why *Pauridia peregrina* Timberlake is not effective in biological control in Queensland citrus.
CORCORAN, Robert (PhD) Physiological and behavioural effects of heat in fruit flies of the family Tephritidae.
DELING, Ma (PhD) Biological effects and utilisation strategies of neem derivatives on cotton bollworm, *Helicoverpa armigera* Hübner (Lepidoptera: Noctuidae).
DILLON, Martin (Masters) Generic algorithms for modelling insect population movement.
GIBB, Dallas (Masters) Early insect damage and its effect in narrow row cotton.
GREEN, Jan (PhD) The ecological role of spiders in a citrus agro-ecosystem.
HUANG, Kui (PhD) Identification of kairomones for host-selection of egg-parasitic *Trichogramma australicum* and *Trichogramma pretiosum*.
JARJEES, Ekhlass (PhD) Cell line-conditioned diet for in vitro rearing of *Trichogramma australicum* Girault (Hymenoptera: Trichogrammatidae).
KUNIATA, Lastus S. (PhD) Management of *Sesamia grisescens* Walker (Lepidoptera: Noctuidae) in irrigated sugarcane. Based in Lae, Papua New Guinea.
LAMBKIN, Christine (PhD) Systematic revision of the Australian members of the genus *Exoprosopa*

(Diptera: Bombyliidae).
MONSOUR, Chris (PhD) Optimisation of *Bacillus thuringiensis* (Bt) usage in the IPM of *Heliothis*.
MUDA, Rahim (PhD) An investigation into the pest management of *Rhizopertha dominica* (Coleoptera, Bostrichidae) in grain storage with azadirachtins-enriched neem kernel extract (ENKE).
NGERNSIRI, Lertluk (PhD) Genes specifying multiple dendrite neurons in the peripheral nervous system of the *Drosophila* embryo.
NOTARTE, Anastacia G. (Masters) Tissue culture of *Helicoverpa armigera* (Hübner) (Lepidoptera: Noctuidae) as an element of artificial diet for *Trichogramma australicum* Girault (Hymenoptera: Trichogrammatidae).
OSMAN, Mohd. Shamsudin (PhD) Physiological and biochemical changes in fruit flies subjected to thermal stress.
PETERS, Brenton C. (PhD) Aspects of management of subterranean termites in Queensland.
PREAP, Visarto (PhD) Outbreaks of *Niliparvata lugens* Stål (brown planthopper) patterns and process.
QUIMIO, Gorgonio (PhD) Mating behaviour as an aid to species studies in the fruitfly parasitoid *Biosteres arisanus* (Sonan) [Hymenoptera: Braconidae].
SALAM, Shahana (Hons) Morphological and molecular studies of *Microconops* (Diptera: Conopidae).
SEEMAN, Owen (PhD) The evolutionary relationships of Trigynaspid mites associated with beetles inhabiting dead wood.
SEXTON, Stephen (Masters) A theoretical and field study of codling moth control using a mating disruption system.
SHAW, Matthew (PhD) Parasitic mites associated with hollow-nesting fauna.
SKEVINGTON, Jeff (PhD) Systematics of Australian *Eudorylas* Aczél (Diptera: Pipunculidae).
SPOLC, David (PhD) A virtual model of the growth habits of red cedar (*Toona ciliata*) and their modification by tip moth (*Hypsipyla robusta*) attack.
ZAVAHIR, Farah (Masters) The Dynamics of Pheromone Production and Release by *Nezara viridula* populations.

School of Agriculture and Horticulture (Gatton Campus)
(Brad Scholz)
RAZZAQUE, Qazi (PhD) Studies on the biology and ecology of the Duboisia Flea Beetle *Psylliodes paralis* Weise (Chrysomelidae, Coleoptera) in Dubosia plantations.
SOLULU, Takis M (PhD) Components of an integrated management system for Giant African Snail inthe Oil Palm agro-ecosystem in P. N.G.

Griffith University
Australian School of Environmental Studies
(Heather Proctor)
RAGHU, S. (PhD) The ecology and behaviour of *Bactrocera cacuminata* (Hering) (Diptera: Tephritidae) in relation to its larval host plant, *Solanum mauritianum* Scopoli.
LYNCH, Romeny J. (PhD) Importance of aquatic insect emergence to riparian terrestrial food webs. (main taxa are adult aquatic Diptera, Ephemeroptera, Trichoptera, Odonata)
HADWEN, Wade (PhD) Effects of nutrient enrichment on perched dune lakes of Fraser Island. (includes contributions of terrestrial and aquatic arthropods to food webs).

SOUTH AUSTRALIA
University of Adelaide
(John Jennings)
Department of Applied and Molecular Ecology
BAKER, Janine (PhD) Population genetics of colonization. [using horehound & horehound plume moth].
BALL, Stephen (PhD) The utility of using genetics to make management decisions about metapopulations.
BOSCO, Vanessa (Hons) Effects of feeding by adults on the foraging behaviour of *Cotesia rubecula*.
CARNE, Vanessa (PhD) Optimisation of fruit fly (Tephretidae) control strategies in South Australia.
CAVAGNARO, Vanessa (PhD) Population dynamics of introduced snails.
FABBRI, Marco (PhD) Glycosylation in immunity & development of *Drosophila melanogaster*.
FERGUSON, Kaye (PhD) Biology, ecology and management of Quandong moth.
HEAD, Elise (PhD) The ecological physiology of the *Fergusobia* nematode and *Fergusonina* fly gall association.
JACKMAN, Darryl (PhD) Biology and ecology of Kelly's citrus thrips *Pezothrips kellyanus*.
KAESLER, Elisa (Hons) Effects of surfactants on the oviposition behaviour of the diamondback moth.
KASPER, Marta (PhD) Population ecology of an invasive social insects, *Vespula germanica* (Hymenoptera: Vespidea) in South Australia.
LEMUS, Ana Alfaro (Masters) Factors that influence biological control of citrophilous mealybug by the parasitic wasp *Coccophagus gurneyi*.
LI, Dongmei (PhD) Innate immunity: studies in the parasitoid wasp *Venturia cancescens*.
MAYO, Gwenda (PhD) Genetic variation in St John's Wort and resistance to *Aculus* mites.
MCCULLOUGH, Tim (Hons) The ecology of lycosid

(Wolf) spiders in association with the Adelaide pygmy blue-tongue lizard.
TRAEGER Anna (Hons) Local movement in the horehound plume moth, *Wheeleria spilodactylis*.
SIEKMANN, Gitta (PhD) Forgaing behaviour of the parasitic wasp, *Cotesia rubecula*
STEPHENS, Claire (PhD) The impact of weed invasion on insect biodiversity and associated community structure and processes.
XIN-GENG Wang (PhD) Patch use, functional responses, and superparasitism in *Cotesia plutellae & Diadegma semiclausum*: from behaviour to population ecology.

Flinders University
(John Jennings)
WALTERS, Anne (Hons) Impact of the introduced Argentine ant on native invertebrate communities.

TASMANIA
University of Tasmania
(Geoff R. Allen)
School of Agricultural Science/CRC for Sustainable Production Forestry
DAVIES, J. (Hons) Occupation of microhabitats, intraplant distribution and dispersal of eriophyid mites on Tasmanian blackberries.
HOWLETT, B. (PhD) Factors influencing *Chrysophtharta bimaculata* oviposition.
LANG, M. (Hons) The spatial and temporal distribution of blowflies associated with fly-strike of sheep and their utilisation of possum carrion as a breeding resource.
NAHRUNG H.F. (PhD) Biology and phenology of *Chrysophtharta agricola*.
POTTER, K.J.B. (PhD) Factors effecting establishment and efficacy of ragwort flea beetle in the biological control of ragwort in Tasmania.
RAPLEY, L.P. (PhD) Genetic variation in susceptibility of eucalypts to insect attack.
REDGROVE, H. (PhD) The ecology of *Heteronyx* spp. beetles; establishment pests of eucalypt plantations.
RICE, A.D. (PhD) Ecology and host interactions of the larval parasitoids of *Chrysophtharta agricola*.
SIMMUL, T.L. (PhD) Biology of fireblight beetle: a defoliator of *Acacia dealbata*.
YEE, M. (PhD) Saproxylic insects and their associations with wood decay fungi in wet sclerophyll forests: implications for ecologically sustainable forest management.
School of Geography and Environmental Studies
DUNN, H. (PhD) Conservation of the invertebrate fauna of the streams of the west coast of Tasmania.
HINGSTON, A. (PhD) Pollination ecology in Tasmanian blue gum.
MALLICK, S. (PhD) The ecological effects of honey bees in the Tasmanian World Heritage Area.
MICHAELS, K. (PhD) The conservation ecology of carabid beetles in Tasmania.
TANUSLIP, V. (Masters) Bio-indicators of polluted freshwater in north eastern Thailand.
YAXLEY. B. (Hons) The insect fauna associated with native pines in Tasmania.
YOUNG, C. (PhD) The ecology and bio-stematics of geometrid moths, key canopy herbivores in Southern Australia.

VICTORIA
Monash University
(Fiona Clissold)
Department of Biological Sciences
BALLINGER, Andrea (PhD) The influence of coarse wood debris on habitat quality for invertebrate fauna in river red gum (*Eucalyptus camaldulensis*) forest.
CLISSOLD, Fiona (PhD) A grazing interaction: Mitchell grasslands and Australian Plague Locust.
FINLAY, Kyla (PhD) Taxonomy and systematics of Australian Ephemeroptera.
HOSKING, Amanda (Masters) Ants, disturbance and *Eucalyptus regnans* forests.

PAPUA NEW GUINEA
(Ray Kumar)
University of Papua New Guinea
Department of Biology
ERO, Mark (Hons) A revision of the *Amblypelta* (Heteroptera:Coreidae) species of Papua New Guinea.
PUTLAN, David (Hons) Laboratory rearing and heat tolerance of the immature stages of *Bactrocera musae* (Diptera:Tephritidae).
GENDE, Paul (Hons) Revision of the *Oncomerinae* (Heteroptera:Tessaratomidae) of Papua New Guinea.

A.E.S. PHIL CARNE PRIZE

The Executive takes pleasure in announcing The Australian Entomological Society's Phil Carne Prize. This prize honours contributions made by Dr Phil Carne to the science of entomology and to The Australian Entomological Society, and is intended to foster high-quality entomological research among young scientists

The prize is open to any undergraduate or postgraduate who has submitted a paper to the **Australian Journal of Entomology** and had it accepted for publication within the last year. Entrants may be enrolled full or part-time, and are not required to be members of The Australian Entomological Society. Entries will be reviewed by the normal Journal referring process. The Chief Editor will advise the Executive of the eligible papers and these will be presented to a selection committee appointed and convened by the Vice-President of the Society.

The winner will be invited to present the winning paper at the Society's Annual General Meeting and Scientific Conference. The prize will be $300 plus free conference registration, accommodation, return airfare to the Annual Conference and presentation of a scroll. Manuscripts and other editorial correspondence should be addressed to Dr Peter Allsopp, Chief Editor, Bureau of Sugar Experiment Stations, Private Bag 4, Bundaberg DC 4670, Australia.

MACKERRAS MEDAL

Do you know an entomologist who deserves special praise?

The **Mackerras Medal** is the Australian Entomological Society's award for excellence and can be awarded every two years to a financial member of the Society who is:

a young entomologist (< 50 y),
pursuing excellent research, and
has outstanding personal qualities.

Any financial member, including students, may make a nomination to the Secretary. The nominations should be received at least 3 months before the AGM and should include:

the Candidate's name and date of birth,
academic distinctions,
appointments and memberships in societies,
a list of the nominee's most important publications, and
a short statement (500 words) explaining why the award should be made.

NOTICE

The research team of Dr. Gerhard Gries (Simon Fraser Univ., B.C. Canada) and Dr. Paul W. Schaefer (USDA, ARS, 501 S. Chapel St., Newark, Delaware 19713 USA) seeks Australian collaborators interested in the identification of sex pheromones of Lymantriid moths. We propose to first target the Painted Apple Moth, *Teia anartoides*. Please contact Dr. Schaefer if interested and if a source of living material is available. Email: paulschaefer60@hotmail.com; or phone: 302-731-7330, ext. 26

COMING EVENTS

The 50th Annual Meeting of the Entomological Society of Canada will be held 3 - 7 December 2000, in Montreal. The meeting will be a landmark one, held jointly with the Entomological Society of America, and La Société d'entomologie du Québec. The three societies are presently focused on the preparations. Please watch the ESA website for information on dates, deadlines and places, and note that abstracts must be submitted via the ESA website (www.entsoc.org).

THE AUSTRALIAN ENTOMOLOGICAL SOCIETY INC.

NOMINATION FOR MEMBERSHIP

To be returned to:

Ms N.M. Endersby, AES Secretary, c/o Institute for Horticultural Development,

Private Bag 15, South Eastern mail Centre, Victoria, 3176, Australia

Email: nancy.endersby@nre.vic.gov.au; Tel: (03) 9210-9222; Fax: (03) 9800-3521

We the undersigned

Proposer: ....
(print name here) (signature)

Seconder: ....
(print name here) (signature)

being financial members of the Society, propose the following for membership of The Australian Entomological Society Inc.:

Title ..... Initials ..... Given Name ..... Family Name .....

of (Address): .....

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Tel: ..... Fax: .....

Email: ..... Degrees, etc: .....

Occupation or Appointment: .....

Interests, experience and publications in entomology for publication in the News Bulletin *Myrmecia* (please attach brief resumé):
I accept nomination and undertake if elected to abide by the rules of the Society and to pay annual subscriptions by the date prescribed.

Signature: ..... **Date:** .....

For **2000**: New student/retired members - $25.00. New full members - $55.00. **Payment with nomination required.** New Sustaining Associates = $500.00.

.....

(EXECUTIVE USE ONLY)

Nom. received: ..... Nom. considered at meeting: .....

Payment received: ..... Elected at meeting: .....

Membership type: ..... Applicant advised: .....

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